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Vol. XXXIX. No. 4. APRIL 5th, 1938 Price 6d.

IMPERIAL MYC
28 MAY 1938
INSTITUTE

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THE FIRST ESSENTIAL in selecting a site for the piggery is good drainage. A gentle slope, facing east is best.

Light, absorbent sandy loams are preferable to stiff clays or soils with a clay subsoil. Clays are apt to become saturated with offensive matter in time, and thus to give rise to unhealthy conditions, especially during wet weather. Where there is a good fall, however, clays are less objectionable.

Yards for pigs should be sufficiently large to enable them to have plenty of exercise. Except in the final period of fattening, when the exercise is restricted, the animals should have a free run. **Pigs are far more healthy when grazed in paddocks than when enclosed in pens.** Where it is not convenient to run the pigs over large areas, and they are confined to small yards, a system of alternate yards gives good results.

Under this system, when one yard becomes foul from constant use by the pigs it can be ploughed or dug up, limed, and a green or root crop sown, the pigs being transferred to another yard. When the crop is up the pigs may be returned to that yard and have the benefit of the food, while the yard just vacated can then be treated in a similar manner. This serves the double purpose of cleansing and sweetening the soil and providing some green food. When the same yards are used for long periods without being rested; the soil becomes a source of infection for various microbic and parasitic diseases.

When pigs are grazed over large areas a portable pig-house, built on slides, is very convenient.

SELECTING THE BOAR.

When selecting the herd boar the best available should be obtained, for during his life he may be the sire of hundreds of pigs, while the sow can only produce a limited number (states the N.S.W. Dept. of Agric.). If the boar is good he will improve the standard of the herd, but if he is mongrel or crossbred he will limit the profits of the pig farmer. His selection, therefore, is of very great importance.

The boar should come from a large, thrifty litter, and be purchased from a reliable breeder. He should be a little more on the compact side than the sow, not too chunky or short, but showing full development at every point, and of a strictly masculine type representing the full type of his breed. He must show quality smoothness and evenness in every part, a typical masculine head, eyes and ears wide apart, the jowl reasonably full and well laid on to the shoulders, which should be smooth and free from wrinkles; there should be a full heart-girth extending well down to the bottom lines, nearly or quite on a level, with as deep a flank as possible; rather short or medium length legs, with bone of fair size and quality, pasterns short and straight, and the hoofs well set, legs standing square, straight and well under him; a long, wide and deep ham, and tail well set up.

Poultry Notes

BREEDING FOWLS FOR EGG PRODUCTION.

The utmost care is essential for a farmer to maintain a high-quality flock, states Mr. J. J. McLachlan, Poultry Inspector, Queensland Dept. of Agriculture.

He considers that the chief considerations for good breeding are type, constitutional vigor, action, and laying characteristics. A laying test a few years ago revealed that of three birds, who laid 302, 296 and 294 eggs respectively, the progeny of the bird have performed very well in laying tests every year since, whilst the progeny of the first and second birds were very disappointing layers.

The reason for this is that the third bird was **strong constitutionally**, and whereas the other two birds showed a loss of condition at the termination of the tests, the third bird was very strong. This example shows that birds that are strong constitutionally are superior for breeding purposes, and although it may take courage not to breed from a 300-egg bird, if the bird cannot stand up to a heavy season's laying it should be discarded, irrespective of other characteristics.

Sambo was taking a short cut home across a frozen river when he slipped and fell down heavily. As he picked himself up slowly, he was heard to murmur: "I could neber un'erstand why, when water freezes, it should freeze the slippery side up."

DUCKS ON FREE RANGE.

Even where a flock of laying hens if run on a farm or orchard there is still room for a dozen or so ducks. Ducks forage in an entirely different manner to hens, and definitely do better under free conditions than when "cultivated."

It is commonly believed that water is essential for ducks to swim about in. This is not so, for although they keep themselves more readily free from lice under these conditions, a bath in a tub or trough will do as well.

GRIT ACTS AS THE TEETH OF FOWLS.

Grit in the gizzard acts as teeth of the fowl, and digestive disorders will soon appear if this is not available to the birds.

Shell grit alone is not sufficient. Although the shells supply the necessary lime, grit such as the commercial commodity, which is generally made from crushed quartz, granite, felspar, and phosphate rock, and is hard, sharp, and angular, is essential.

Experiments have proved that oyster shell is soon dissolved under the strong acid of the gizzard, and the grinding, and that grit (limestone) takes the place of both shell-grit and oyster-shell. It has also been shown that hens prefer the bright limestone to other kinds of grit.

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News of the Month

Revision of Ottawa Agreements.

THE Australian Trade Delegation has sailed for England, where they will be joined by the vanguard which went to U.S.A. first. There is a goodly army of Cabinet Ministers and Departmental Officials. The delegation is headed by the Minister for Commerce, Sir Earle Page. Various industries are sending unofficial advisers who will thus be available to tender technical advice as wanted. The Canned Fruits industry has sent four advisers. The Australian Apple and Pear Council is already represented in London by Mr. Everard Ross, and his services will be available to the trade delegation.

The importance of the matters under discussion cannot be over-estimated. There is the revision of the Ottawa Agreements and the Dominions' interest in the Trade Treaty between England and U.S.A. With the present sorry spectacle of a world in arms, grave responsibilities rest upon the English speaking peoples. Improved trade relations will be helpful in this connection. However, Australia's trade with the old country is tremendously important, especially in the shipping of primary products.

The Australian Trade Delegation and its advisers are in full possession of all needed information; thus the work of negotiating may be confidently left to these experienced folk, specially bearing in mind that the various sections of Australian primary industries were consulted before the delegation left, at a conference under the auspices of the Commonwealth Council of Agriculture.

Scientific Research.

The annual report of the Commonwealth Council for Scientific and Industrial Research makes interesting reading. The Government is to be congratulated on its setting up of this important Council; in addition, many sections of primary and secondary industry make financial contributions in order that specific work can be carried out. The Council itself has won the confidence and esteem of the people for its efficiency. The Chairman is Sir George Julius, and the Chief Executive Officer Sir David Rivett.

The report provides information as to investigations into plant and tree problems, entomology, noxious weeds, animal health and nutrition, soil, irrigation settlement, forest products, food preservation and fisheries.

In this issue we have quoted several excerpts dealing with the fruit industry.

There is one subject which was brought up at the last meeting of the Australian Apple and Pear Council and referred to the C.S.I.R., viz., the high price of nicotine sprays, and as to whether a cheaper but equally effective substitute could be found. The fruit industry would be grateful if researches in this direction could be pursued.

Empire Producers' Conference.

As we go to press the Empire Producers' Conference is sitting in Sydney. This is an important gathering, and is one of the features of the 150th Anniversary celebrations of Sydney. Delegates are in attendance from England, Scotland, Canada, South Africa, New Zealand, and Australia.

Economic surveys were presented showing the state of the primary industries in the several countries represented. Then the Conference divided into "industry" sections—meat, butter, fruit, etc. The Apple and Pear Council is represented by its Vice-President, Mr. J. H. Astell, supported by a N.S.W. member of the Executive, Mr. J. W. Blick.

Among the subjects for discussion were "Consideration of the disposal of surplus primary products for export. The development of intra-Dominion trade as the key to Dominion development."

Consideration was to be given to the establishment of a liaison and consultative committee of Empire producers to review Empire policy.

It is to the credit of the Australian Apple and Pear Council that this need was foreseen and in assisting in the setting up in London of the Empire Fruits Council constructive work of a far-reaching character was performed.

Fruit Advertising.

Various sections of the Australian fruit industry are wisely conducting publicity campaigns. These fit in admirably with the findings of our Nutrition Committees, the value of fruit being consistently stressed.

Industries which can provide the funds for publicity are indeed fortunate—the effort is well worth while, and the expenditure is fully justified.

The Apple and Pear industry has sought means for raising the needed funds by means of an excise or sales tax levy. But the Commonwealth Government cannot see its way clear to provide the needed Act or Regulations. An educational publicity campaign to increase the consumption of Apples within the Commonwealth would be of constructive service to the industry. It would move into consumption just that surplus which clogs the market and drags down prices. Increased Apple consumption would benefit the health of the people.

While not so far providing Apple growers with the means for collecting the needed levies for educational publicity, the Commonwealth Government has again provided a sum of money to form the nucleus of a campaign for 1938. £2,000 is to be provided by the Commonwealth and the States will be approached to supplement the sum. Contributions by

growers and traders would be esteemed.

Perhaps it should be mentioned here that the advertising of various fruits is not really competitive. Rather is it co-operative and complementary. The general tendency is to inculcate the fruit habit generally among the people.

"Do your duty and a little more."

PERSONAL

Mr. J. E. Thomas, of the N.Z. Govt. Internal Marketing Department, visted Mildura in mid-March. He was impressed with the substantial developments in the dried fruit industry and the layout of Mildura.

The Victorian Attorney-General, Mr. Bussau, has been appointed Agent-General for Victoria in London. This involves Mr. Bussau's resignation as a member of Parliament and the United Country Party has invited nominations for the seat thus vacated.

Mr. T. J. McKinley has been appointed market representative in London of the Tasmanian State Fruit Board. He sailed for London on March 12.

Mr. A. Powell, who for some years has been the engineer in charge of the Blackburn Cool Stores, has gone to New Zealand to take charge of the Cool Stores of which the late Mr. Roderick Sutherland was the Chief Engineer. Mr. Powell's place at Blackburn will be held by Mr. T. Cullen, of West Doncaster.

In the Victorian Department of Agriculture there are three new Fruit Packing instructors employed temporarily for the season under the Commonwealth Grant. These are Messrs. Gemmell, Edwards and Tunbridge.

Mr. Colin Gemmell is stationed at Ringwood and has packing classes at Blackburn, Croydon, Kilsyth, Doncaster, Wantirna, East Burwood, and Hurstbridge. In addition gives instruction to individual growers in that stretch of country from Healesville, Panton Hill, Diamond Creek to Blackburn.

Mr. Reuben Edwards has the whole of the Mornington Peninsula, with classes at Somerville, Tyabb, Hastings, and Red Hill. Growers and packing houses are visited in addition to the classes. Both instructors have classes for adults in addition to children.

Mr. Cyril Tunbridge worked among the growers in the distant parts of the State such as Quantong, Pomonal, Amphitheatre and surrounding districts, Portland and Stanley.

Mr. W. Harris, Assistant Fruit Packing Instructor, has both adults and children in classes and individually at Harcourt, Pakenham Upper, Pakenham East, Pakenham Army Rd. and Bunyip. The whole of Gippsland keeps Mr. Harris very busy.

Mr. Basil Krone is the Chief Fruit Packing Instructor. He will conduct classes when the cool storage season is operating. Meantime, all varieties of fruit, particularly at this time of the year, keep him exceptionally busy.

NEWS IN BRIEF

Tick Beans have proved to be the best Winter-growing leguminous crop for green manuring at Griffith, N.S.W.

Inadequate soil drainage has been proved to be responsible for 20 per cent. of "die-back" in Apple trees throughout Australia.

What is the normal shape of a Cleopatra Apple? This question is being asked in Tasmania because of rejections. So many Apples are a little less developed on one side that our Tasmanian correspondent thinks this should be considered normal for the variety.

Rind abrasions of Oranges caused through rough handling are the principal causes of mould. In a recent test, 19 per cent. of the bruising was caused during picking, 34 per cent. during transport in field boxes, and 43 per cent. in the packing shed.

The average life of the Apple tree is three times as great in Tasmania as it is in Queensland, states the Council for Scientific and Industrial Research.

There is a noticeable increase in the use of the Canadian type case for Apples this season in Tasmania.

Strawberry culture in N.S.W. is threatened with extinction unless Root Rot is checked. The Plant Breeding Branch of the Department of Agriculture is at work on disease resistant varieties.

A fruit case problem has developed in Tasmania this season. All sizes of dump cases ranging between the 8½ in. and 9 in. in width are being used; thus there is the difficulty of arriving at uniformity of pack.

Fruit canning records have been broken this season. Shepparton processed 276,000 cans in one normal day shift; Ardmona 293,000 day and evening session (previous record 276,000). Leeton is reported to have processed 300,000 cans on March 17, believed to be the record for any cannery in the British Empire.

GOODMAN'S
FRUIT TREES

Raised in a district eminently suitable for producing sturdy fibrous-rooted trees. Growers are supplied with same quality stocks as are planted in Goodman's own orchards. All varieties for new season's plantings. Write for catalogue.

C. J. GOODMAN PICNIC POINT NURSERIES
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NEPTUNE SPRAYS . . .

The better quality of NEPTUNE Sprays is always obvious by comparison with others. NEPTUNE Sprays conform to the highest standards, and they are consistently uniform in strength and quality. Successful orchardists recommend them. Try them yourself and prove that they're better!

NEPTUNE PREPARED RED SPRAYING OIL ("A," "C," or Heavy Base)
NEPTUNE PALSOL (Prepared Pale Oil)
NEPTUNE CLARIFOL (Winter White Oil)
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NEPTUNE LIME SULPHUR SOLUTION (Clear, amber-coloured, free from sludge)
GENUINE MACCLESFIELD BLUESTONE
CHEMICAL SULPHUR (23871)
BERGER'S ARSENATE (Powder or Paste)
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ENGLISH BLUESTONE SNOW
GENUINE BLACK LEAF 40
NEPTUNE LIME
POWDERED SULPHUR
COPPER SPRAY
NEPTUNE SPRAY SPREADER

NEPTUNE OIL CO. PTY. LTD. (INCORPORATED IN N.S.W.) ALL STATES

N.O .04

Letters to the Editor

Marketing the Apple Crop

Need for Supplying Good Fruit and Judicious Advertising.

To the Editor,
Sir,

The position of Apple growers in Victoria is undoubtedly a serious one.

Two indications of this fact have recently come to the notice of the present writer.

A couple of orchards in this district have been sold recently at, say, half the value which they might safely have been thought to be worth 6 years or so ago. Shares in the local cool store are regarded as being saleable at considerably less than they were a few years ago, although actually during that period a considerable amount of money has been repaid from the loan granted by the Government.

Another indication of the position is that while probably any Apple-grower, if asked to vote whether the growers in some districts should suffer a diminution in their crop, would vote against that possibility, yet, nevertheless, most growers, if they were honest, would "give in" that it would brighten their own prospects if some such failure did occur.

There is a "facing of facts" which leads to apathy and despair, but there is another way of facing them by trying to find some remedy.

A certain facile optimism is apt to say, "Perhaps another season will be better," but in view of the fact that both Australia and the United Kingdom are regarded as being in a prosperous position at the present time, there seems to be no foundation for that optimism unless some radical alteration is made in the system of marketing.

Some years back the Apple-growers in America were faced with very much the same position, and came successfully through it by organised marketing, and in Australia the dried fruit industry appears to have benefited along the same lines.

It seems possible that our own country will eventually be found the best market for our Apples, owing to the fact of the heavy cost of sending them overseas, and also the competition, which is increasing, from other sources.

Temporarily, perhaps, a scheme, such as was suggested some years ago, for marketing a certain percentage of the crop (possibly as one complete line), overseas at a just payable figure might help, though it is self-evident that (as in the dried fruit industry) such a scheme would have to be compulsory, a fixed percentage of every growers' total crop being used for this purpose.

As regards the Australian market, it would appear to be essential to market only good fruit—the sale of inferior fruit prevents the sale of good fruit and also gives the consumer a distaste for fruit.

At the present time growers who are struggling naturally tend to market every Apple they can, but many growers would be willing to market only good Apples if all the growers would do the same. For this, however, some kind of uniformity and compulsion—whether on the part of the growers themselves or of the Government—seems to be essential.

A few years ago any such suggestion would have been rejected by the growers, but hard times have made many growers realise that something decided must be done.

Probably the carrying out of any decision as to what fruit should be marketed would have to be entrusted to central packing-houses, and they and a central authority would have to be given the power to decide what standard of Apples were sent away, and possibly to what markets.

By the marketing of only good fruit and by judicious advertising, it is the belief of many that the Apple-growing industry could be placed on a prosperous basis, i.e., Apples sold at a reasonably payable price.

Two further points might be mentioned, though on these growers might differ in their opinions.

(1) Marketing of immature Apples.

Although a good price is often obtained for such fruit, it is thought by some that such fruit is bad from the medicinal and health point of view, and, in addition, the consumption of such fruit, even when fairly well colored on one side, gives the consumer a distaste for Apples which later on, in their prime, would have appealed so much to the consumer.

This applies both to the overseas market (even although the appalling green Jonathan Apples are not approved of, and allowed to be sent by the authorities nowadays), and to the local markets.

(2) An individual suggestion.

Since it is the consumers who buy the Apples, and if they like them, buy more, might it not be a good idea to get their opinion as to what is a good Apple.

It seems probable that in the past the Department has graded by the defects, i.e., an Apple might be, according to the regulations, correct, but un-appetising for all that, while a well-colored reasonably mature Apple might be rejected owing to some technical flaw, which a consumer would not consider a flaw at all.

In conclusion, the writer does not necessarily claim to have any special wisdom, but at the present time it seems to be necessary for growers to be willing to write down what they think, so that other growers may criticise what is said, provided that such criticism is "constructive," and not merely "destructive," i.e., if any proposals are not only looked on as difficult to carry out, but also (in their opinion), not the best remedy, then state in what better way things can be righted.

A policy of some definite kind seems to be needed, rather than the policy of letting things drift.

Yours, etc.,
F.P.F.

Tyabb.

Tree Injections

January 15, 1938

The Editor, "Fruit World."
Sir,

Re article in the January issue of the "Fruit World and Market Grower" and description of how to cut zinc points. These are shown much too wide in the illustration. I find if made with too wide an angle the growing bark has a tendency to force them out. I advise anyone trying this treatment not to make them wider than 5/32 of an inch—¼ in. is even better, with a sharp point so that it penetrates the wood and gets an extra grip.

It is the narrow and sharp points that are inclined to curl and need straightening.

Since writing you re injections, etc., I have done some experimenting, mostly in an attempt to discover a remedy for Scale for Aphis by the former method. It is too early to give results, but I have found out that some of the material used to pack into bores finds its way into the cambium layer, or is forced past the grafting wax stopper. This affects the cambium layer and the bark above it pretty badly, with some ingredients, so I would advise first to prepare the places it is intended to bore by cutting out a circle of bark with a gouge, say, ¾ in. or 1 in. in diameter, and let the exposed wood dry thoroughly before boring in the centre of this exposed spot to insert ingredients desired.

This should stop the trouble I have had. It is obvious that any injections into the cambium layer itself must be very weak.

Re potash deficiency symptoms. Potash is not looked upon by most fruitgrowers as a necessity, who have gone nap on nitrogen, the benefits of which are much more spectacular.

Yours faithfully,
(Sgd.) W. E. MUSPRATT.

Industrial Alcohol From Waste Fruit

To the Editor of the "Fruit World and Market Grower."

Sir,—

Since my last letter I have sought out one of the best authorities on distillation in Sth. Aust. This gentleman has had a life's experience in this form of business. I showed him the correspondence that has taken place from the beginning. He said: "It appears that you want to commercialise the waste fruit"; I said "Yes." He went on to say it would be quite an easy matter to do so.

First I should have used the words "Industrial" or "Commercial" alcohol instead of "Power" alcohol. In due course of time, power alcohol will

— THE —
BAVE-U
Power Sprayer
—— Keeps the Mixture in the barrel as even at the end as at the beginning of Spraying. ——
Information with pleasure.
Russell & Co.
Box Hill, E.11
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Extract from "BETTER FRUIT," March, 1937, by Dr. R. L. Webster, Entomologist, State College of Washington, Pullman: CODLIN MOTH COVER SPRAYS—"Ever since the imposition of an arsenic tolerance in 1926, and even before that time, investigators have been testing other materials which may be used in place of lead arsenate. Following all these intensive and extensive investigations lead arsenate appears to have certain inherent qualities which place this material foremost as an insecticide for codlin moth control."
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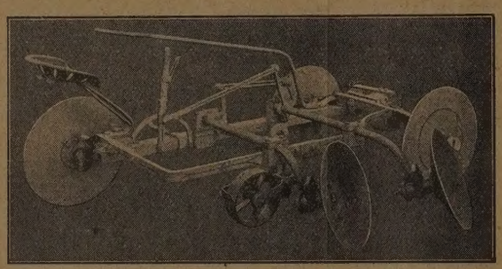

The steering arms are drop forged from the best mild steel and the main wheels are equipped with ball bearings.

Two medium horses can work this machine all day without tiring. A machine may be obtained for a trial at any time.

A sturdy, strong plow equipped with reversible discs to enable the operator to plow up to, or away from the trees. Operated by a single lever and with nothing to catch branches of trees. To facilitate the movement of the plow around the orchard the discs are movable and lift clear of the ground.

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come from waste fruit as there appear to be great possibilities of making many valuable by-products from the remains of the crushed fruit after extracting the alcohol.

My informant continued: "For the present, all you need to do is to amend the present existing laws of fortifying wines, etc., from Grapes and all your waste fruit troubles are over," add other products from the Apples, etc., such as the making of liqueurs and gin: if this is done in the proper way your waste Apples will return to the grower practically the same value in money as your first-class Apples!" Think of it, brother fruitgrowers!

Why the amending of these laws has not been advocated by fruit officials is clearly pointed out in my letters of the "Fruit World" of November 5 and January 5.

I am informed that the majority of distillers would be delighted to help the fruitgrowers. The only big opposition would be the Grapegrower. Other sections of the industry, however, are just as important. If grapegrowers can cart their Grapes to the distillery in bulk, why cannot the fruitgrowers do the same?

The whole trouble has been caused by Government interference with private enterprise, encouraged (I am sorry to say) by a certain class of ignorant fruitgrowers.

If the existing laws are amended and it does not bring success and a financial benefit to the fruitgrowers—to show my sincerity, I will give a gold watch, valued at £10 to your contributor "Commonsense."

Yours, etc.,

"STILL DOING MY BIT."

Sth. Aust., 21/3/38.

Dip for Dried Fruits.

To the Editor,

Sir,

Re "Mid Murray Notes" of March 5. I noted your correspondent wrote to the effect that research work at the Merbein Experimental Farm resulted in the "Potash content of the dip mixure being reduced to 18 lbs. to 50 gal., etc.

Those of your readers who are intimate to this industry will know quite well that the research people certainly did not originate the idea—either of prepared emulsion or of the lower potash strength now recommended by them.

For the benefit of other readers I would point out that Voullaire Bros. were the first to market emulsified olive oil for potash dips. That, in actual effect, both this action, as also our recommendation to use less potash with this prepared emulsion, was at first looked on with considerable doubt by the research people.

Naturally, research people should take a conservative view of any new departure from any "standardised" process—that must be expected, but why the tendency on the part of writers to accredit them with the originality, when, after all, they merely agreed—after initial opposition—that their subsequent researches proved the new departure to be of advantage.

We spent much money and time experimenting before we successfully marketed an emulsified oil for dip purposes. After we did the actual groundwork successfully, others attempted to "cash in" on the idea, which is a natural sequence one might expect of commercially-minded people. But I personally strongly resent any writing, which might easily be construed by the reading public, that the originality of this important and economic change in the "cold dip" process is credited to the Merbein Experimental Farm.

R. M. VOULLAIRE, Jr.

Merbein, Vic., March 26, 1938.

Concentrated Apple Juice.

THE ATTEMPTS to concentrate Apple juice so as to leave it with unimpaired flavor are briefly reviewed in the "Bulletin" of the Imperial Bureau of Fruit Production. The first efforts would appear to have consisted of boiling cider in tanks or barrels, the resulting product being extremely unpalatable. Next, when low temperature evaporation in a vacuum pan failed to preserve the true fresh Apple aroma, various partially successful attempts were made to collect the esters released during the process and re-impregnate the product with them.

A new type of vacuum concentrator for fruit juice was evolved at Pullman, Washington, the main feature of which was the heating of juice as it passed through a steam jacketed tube. The tube emerged into a separator where the sensible heat of the juice caused sudden evaporation to take place under the vacuum conditions obtaining. The vapours were then separated from the juice and passed on to the condenser to be recombined later with the concentrate.

Again, it was considered that **slow freezing, combined with centrifugal action,** should produce a good concentrate, and patents have been granted for apparatus designed for the purpose.

It is now also suggested that a combination of freezing concentration, in which the volume of juice is reduced by one-third by freezing, rapid evaporation in which a proportion of the flavor is left in the concentrate and the addition of flavor should be practicable.

The U.S. Fruit and Vegetable Products Laboratory at Pullman, in co-operation with the State College of Washington, is at work on these lines. It is also studying methods of classification of Apple juice and its preservation by flash pasteurisation.

Nutrition Studies.

Wrong Dietary Habits Cause Trouble.

More Fresh Fruit Needed.

The conclusion come to by members of the Commonwealth Nutrition Committee is that the cause of undernourishment in Australia is not caused by any insufficiency of food, but wrong eating.

There is a marked deficiency of bone-forming foods, containing minerals, in the national diet. Children from the outback suffer from lack of fresh foods.

A request is to be made to the Government to ensure that the inhabitants of these areas receive frequent supplies of fresh fruit, and efforts will be made by the Committee to guide the people in correcting their food deficiency.

Master: "If a customer comes and wants to look at a piano, flute, or mandolin while I'm at lunch, you know what to show him?"

Boy: "Yes, sir."

Master: "And if a customer should want to see a lyre."

Boy (interrupting): "I'll send for you at once, sir."

CONTROL OF INSECT PESTS AND DISEASES

Analyses of Arsenate of Lead

Tests in South Australia.

IN THE TABLES hereunder, the results of analyses are given of 15 samples of lead arsenates collected recently in South Australia by inspectors of the Department of Agriculture.

To add further to the interest of these tables an average percentage content of the 15 samples has been prepared; it has been taken on the "moisture free" basis, and is as follows:—

Average of Fifteen Samples.

	Per cent.
Lead oxide	63.84
Arsenic expressed as arsenic pentoxide	31.83
Water soluble arsenic expressed as arsenic pentoxide	.18
Undetermined	4.15
	100.00

Suspension tests:—

5 minutes = 76.79 per cent.
30 minutes = 58.31 per cent.

The individual contents of lead oxide in these 15 samples ranged from 61.8 to 65 per cent., the arsenic oxide from 30.6 to 32.7 per cent., and the arsenic in a soluble form from .04 to .43 per cent.

It was in the suspension tests, however, that the most marked disparities occurred. In this direction, under the 5 minutes test, the highest place was gained with a 95.5 per cent. suspension, and the lowest place filled by a suspension of 13.9 per cent. The 30 minutes test found 89.5 per cent. to be the best, and, indeed, a very creditable result, while the preparation having the weakest powers of suspensibility fell to the low figure of 10.4 per cent.

Or by taking a mean of the 5 and the 30 minutes tests of each sample separately the resulting figures seem to offer a better comparison. By this method it is found that the percentages remaining in suspension were:—

	Per cent.
1 sample reached	92
5 samples reached between 80 and 90	
4 samples reached between 70 and 80	
1 sample reached between 60 and 70	
1 sample reached between 50 and 60	
1 sample reached between 30 and 40	
1 sample reached between 20 and 30	
1 sample reached only	12.1

The tables of analyses as furnished by the Department of Chemistry and published in S. Aust. Jour. Agric.) are now appended:—

No.	Brand.	Moisture.	Lead Oxide. (PbO.)	Total Arsenic, Expressed as As_2O_5.	Water Soluble Arsenic, Expressed as As_2O_5.
		%	%	%	%
3421	"Lunevale" Powder	0.7	63.4	31.8	0.11
3422	Blair's Powder	0.2	63.8	31.8	0.16
3423	"Aero" Powder	0.6	64.5	31.8	0.16
3424	"Aero" Paste	51.2	31.7	15.0	0.02
3425	"Elephant" Powder	0.9	63.1	31.8	0.16
3429	Cooper's "Arsinette" Powder	0.6	61.5	31.5	0.18
3430	Hemingway's Powder	0.3	64.7	31.5	0.34
3431	"Palmprest" Powder	0.3	64.1	30.5	0.07
3433	"Vallo" Paste	48.9	32.8	16.7	0.16
3434	"Vallo" Powder	0.6	63.9	31.7	0.43
3436	Berger's Powder	0.2	64.1	32.5	0.18
3438	"Plane" Powder	0.6	62.7	31.8	0.15
3439	Berger's Paste	53.5	29.7	14.9	0.02
3440	Berger's Colloidal	41.8	36.1	18.0	0.08
3441	"Blue Bell" Paste	49.5	32.2	16.4	0.08

On Moisture Free Basis.

No.	Brand.	Lead Oxide. (PbO.)	Total Arsenic, Expressed as As_2O_5.	Water Soluble Arsenic Expressed as As_2O_5.	Suspension Tests. 5 Mins.	30 Mins.
		%	%	%	%	%
3421	"Lunevale" Powder	63.9	32.1	0.11	74.2	33.7
3422	Blair's Powder	63.9	31.9	0.16	87.8	69.4
3423	"Aero" Powder	64.9	32.0	0.15	81.0	59.7
3424	"Aero" Paste	65.0	30.8	0.04	13.9	10.4
3425	"Elephant" Powder	63.6	32.1	0.16	95.2	82.1
3429	Cooper's "Arsinette" Powder	61.8	31.7	0.18	84.1	77.7
3430	Hemingway's Powder	64.9	31.6	0.34	87.3	67.3
3431	"Palmprest" Powder	64.3	30.6	0.07	33.6	11.1
3433	"Vallo" Paste	64.1	32.7	0.32	83.9	55.9
3434	"Vallo" Powder	64.2	31.9	0.43	90.7	59.0
3436	Berger's Powder	64.2	32.6	0.18	42.9	19.2
3438	"Plane" Powder	63.1	32.0	0.15	95.5	82.3
3439	Berger's Paste	63.9	32.0	0.04	93.5	78.9
3440	Berger's Colloidal	62.0	30.9	0.14	94.6	89.5
3441	"Blue Bell" Paste	63.8	32.5	0.16	93.6	77.8

MANURING FRUIT TREES.

Spread Evenly to Beyond Outer Fringe of Foliage.

Fertilisers for orchards should not be placed close to the butts of the trees, but should be spread out well beyond the outer fringe of the foliage. It should be worked in with the plough, cultivator or forked hoe, and a small area only should be spread out at a time, so that the fertiliser can be worked in before it is washed away by rain.

Where time will permit, one of the best ways of applying fertiliser is to spread it just prior to ploughing.

Care must be taken to see that the fertiliser is not in lumps, but is evenly distributed.

"DIE-BACK" IN APPLE TREES..

Defective Drainage an Important Factor.

A SURVEY of the incidence and relative importance of the diseases which cause "die-back" and "sour sap" in Apple trees was recently made by the C.S.I.R. The survey covered orchards in the main Apple growing centres of N.S.W., Victoria, S. Australia, W. Aust. and Queensland, and showed that (a) Fungal root rots, such as Armillaria mellea, wound parasites, such as Polystictus versicolor, malnutrition or lack of fertilisers, and loss of surface soil by erosion, are factors which cause die-back, but vary in incidence and importance in different localities, and rarely constitute the most frequent causes of die-back in any district. (b) **Inadequate soil drainage is responsible for approximately 20 per cent. of the die-back in nearly all districts.** (c) In Victoria, and to a lesser extent in N.S.W., injury occasioned by the Apple root borer is a very prevalent and important cause of tree decline. (d) The most important and widespread type of die-back is that known as pruning die-back in W.A. and rosette or "little-leaf" in Queensland and S. Aust. This disease, the cause of which is at present unknown, is developed in all districts north of latitude 36 deg. S., becomes severe north of latitude 35 deg. S., and, generally speaking, increases in severity as one goes northward. It appears to be closely correlated with, and the main factor determining, the longevity of the Apple tree under Australian conditions. **The life of the average Apple tree is probably three times as great in Tasmania as it is in Queensland.** This disease constitutes the main cultural problem in N.S.W., W. Aust. and Queensland.

BORDEAUX MIXTURE AND ITS PREPARATION.

THE USE OF COPPER as a fungicide is widely established, but to minimise the possible danger of plant injury due to soluble copper, lime is added to the copper salt (bluestone) solution. This combination spray is known as Bordeaux Mixture.

The proportions of the constituents of Bordeaux Mixture are indicated by a formula, in which materials are arranged in the order of bluestone (copper sulphate), lime, and water. The most commonly used formula is the 6-4-40 Bordeaux Mixture, which means that 6 lb. of bluestone, and 4 lb. of "freshly burnt" or "quick" lime, are used to every 40 gallons of water.

Bordeaux Mixture may be prepared in a variety of ways, but the most satisfactory method is as follows:—

Dissolve the required quantity of bluestone in four or more gallons of water in a **non-metal container**, and add this to the spray tank when threequarters full of water. Slake the quicklime by adding small quantities of water, and mix the slaked lime thoroughly with 3-4 gallons of water, until an even milky mixture is obtained.

This should be strained slowly into the spray vat with the agitator working. Make the spray up to the required volume and use immediately after preparation.

Growers who are using large quantities of Bordeaux Mixture will find it convenient to prepare concentrated solutions of the separate ingredients. This is done by dissolving one pound of blue-stone in each gallon of water, thus for a forty gallon cask, 40 lb. of bluestone should be dissolved.

BEST BY TEST

LEAD ARSENATE
LIME SULPHUR SOLUTION

RESULTS OF ANALYSES:

See Department of Agriculture Journal, November, 1937, pages 554 to 557, for results of official analyses, or January issue of the "Fruit World."

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PROVED THE BEST
HIGHEST GRADE and PURITY

The report states that the Lead Arsenate showing the highest Arsenical Content was 99.60 per cent. pure.

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"VALLO" PENTOXIDE
LIQUID 36% As_2O_5
GRANULATED 83% As_2O_5

ARZEEN
LIQUID 48% As_2O_3
POWDER 80% As_2O_3

Highly Concentrated Preparations of

SOLUBLE ARSENIC

READY FOR IMMEDIATE USE

The most effective and economical weed-killers. Eradicates blackberries and all other noxious vegetation. Completely kills useless timber and prevents growth of suckers.

Supplies Obtainable All Stores *Write for Particulars, Dilutions, Etc.*

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The concentrated solutions in water are then ready for use and may be kept for long periods without deterioration.

Bordeaux will speedily corrode most metal containers, and in consequence should be dissolved and stored in wooden tubs or casks, or metal vessels which have been treated with several coats of an anti-corrosive paint.

Ready-made "Bordeaux" Mixtures are on the market, but are not as effective, or as adhesive, as the freshly prepared, properly balanced home-made mixture.

The use of granular bluestone (e.g. "Neige" crystals) and freshly hydrated (slaked) lime simplifies the preparation of Bordeaux Mixture. Where freshly hydrated lime is used, instead of quicklime, the formulae for Bordeaux Mixture are altered as follows:—

Proportions — Bluestone, Lime and Water.

Using Quicklime.		Using Hydrated Lime.
6–4–40	becomes	6–6–40
3–3–50	„	3–4–50
1–1–100	„	1–1½–100

When prepared as above the spray mixture should be definitely alkaline, but orchardists, particularly those using a hydrated lime, should test the spray mixture in the vat by one of the following methods:—

1. Potassium Ferrocyanide test. Take a little of a Bordeaux Mixture in a glass vessel, add a few drops of acetic acid, and then a few drops of 20 per cent. potassium ferrocyanide solution. Should any brown discoloration occur, more lime concentrate should be added to the vat until no discoloration is apparent on testing.

2. Litmus test. If the spray mixture is acidic in nature, blue litmus paper will turn red.

3. If there is insufficient lime to neutralise the bluestone, a reddish-brown deposit will form when the clean blade of a knife or a shiny nail is dipped in the solution for a few minutes.

Always use a little too much rather than too little, as quite a considerable excess of lime may be used without the fungicidal properties of the spray being markedly lowered. Care should be taken to store hydrated lime in airtight containers.

When combining lead arsenate with Bordeaux Mixture, prepare the Bordeaux Mixture first and add the solution of lead arsenate to the mixture in the vat with the agitator working.

A spreader, either white oil emulsion at the rate of 1 pint per 100 gallons or calcium caseinate ½ to 1 lb. per 100 gallons, may be used with Bordeaux Mixture.

The foregoing was prepared by the Department of Agriculture (Horticulture Division), Melbourne.

BANANA INVESTIGATIONS.

Black-end, Squirter, and Stem-end Rot

DETAILED TESTS of dipping treatments for the control of Squirter disease by the Council for Scientific and Industrial Research showed that many fungicides failed to give adequate control, or, when used in effective concentrations, resulted in severe injury to the fruit. It was found, however, that the proprietary fungicide, Shirlan A.G., when used as a 1 per cent. suspension, gave complete control of the disease in dipped single fruits (fingers), and did not cause any appreciable deterioration in appearance.

For fruit dipped in the form of part hands and then broken into singles, the control, while good, was not as complete as that obtained with the direct dipping of singles.

Since the great majority of cased Bananas are packed as singles, **dipping of the fruit on the plantation as soon as possible after they are removed from the bunch should prove effective for the complete control of Squirter; it need, of course, be applied** only on fruit from plantations where previous experience suggests that Squirter is likely to occur to an extent which is of commercial importance. It is worthy of note that this treatment also reduces black-end, particularly that due to Nigrospora.

The detailed studies of Black-end disease caused chiefly through attack by Gloeosporium musarum have been completed, and the results will shortly be published by the C.S.I.R.

An interesting result has been forthcoming from a study of **Stem-end Rot** caused by Thielaviopsis paradoxa. This organism is a well-known parasite of a number of agricultural crops, including pineapples and sugar-cane. It had been suggested, therefore, that Bananas might become infected from diseased pineapples and sugar-cane. More detailed investigations have now shown, however, that this is unlikely to occur, since a study of the strains of T. paradoxa from Bananas, Pineapples, and sugar-cane clearly shows that, in Australia, the Banana strain constitutes a distinct variety, and the sugar-cane, and Pineapple strains, have a very restricted pathogenicity when inoculated into Bananas.

Investigation into the cause of "Rubbery" Bananas are not completed.

VISITOR FROM S. AFRICA.

Prof. Reinecke Doubts Wisdom of Summer Cultivation after Rain.

A visitor to Australia, under the system of interchange of scientific knowledge between our State and Commonwealth Authorities and the South African Union, is Professor C. S. H. Reinecke, who occupies a chair of agriculture at the Stellenbosch University, South Africa.

Professor Reinecke, himself a practical fruitgrower, reports that in the light of recent experiments conducted by Messrs. Hendrickson and Viehmeyer, of the California Agricultural Experimental Station, the practice of dryland farming is gradually decreasing, despite the opposition of the conservative Dutch farming element. Wherever possible now, irrigation is taking place.

Although undoubtedly Summer cultivation deserves merit for water conservation, it is not as advantageous as was previously considered. The practice in the past has been to cultivate intensively and stir up the soil after each Summer shower, but as orchard work is largely a question of economics, the main question is whether the cost of the work involved is justified. The results in South Africa have not proved commensurate with the cost, and this would be especially applicable to Australia, where labor costs are not low.

Gargoyle RED Spraying Oil

NOW is the time to prepare to check the ruinous habits of orchard insect pests. If orchard pests were as big as hares you'd see them on the job and go after them with a gun. Because they are microscopically small and work by stealth, other means of combat are necessary. Gargoyle RED Spraying Oil has ever been the choice of ALL discriminating orchardists for the dormant season spray program. Order YOUR supplies NOW . . . Smother the bugs before they "dig in."

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VICTORIA

Mildura, Merbein, Red Cliffs, Irymple

Marvellous Progress of Stabilised Industry

By Our Travelling Representative.

ONE of the troubles in the drying season of Currants, Raisins, etc., is the dust which blows about the yards.

Mr. V. Kranz, of Mena-road, Birdwoodton, has overcome this difficulty somewhat by spreading the stems of Raisins from the drying racks 3 in. deep all over his yards. This also makes for cleanliness in wet weather, as well as helping the house to be free of mud.

Mr. Kranz is to be congratulated on the way he has "brought back" his vineyard to a state of perfection, also for the erection of a new ideal blocker's home, with a wide verandah —most suitable to a hot Summer climate.

Although pride of place in Mildura and district must be given to Sultanas, Currants and Lexias, in the order named, quite a business is done in table Raisins; these are sun dried and not dipped, care being taken not to damage the bunches, and preserve the natural bloom. These are sold in cartons as "clusters," and realise high prices, but the demand is limited.

Walter Bros., of Merbein, specialise in "clusters," as well as producing all the other Raisins in bulk. Here again we have A.I.F. men who, by perseverance, intelligence and system, have established a substantial industry.

There is a competitive spirit amongst householders through their flower gardens, which are "in excelsis" from June to December. Unfortunately for the flowers, the water supply is cut off for the first 3 months of the year, as dryness of air is so essential to processing the fruits, no pumping is done, and humidity kept down.

When visiting this district in Mid-November, scores of beautiful gardens were at their best, Roses, Gladioli, Delphiniums, Larkspurs, Cacti and Succulents were particularly fine.

Everywhere are shelter trees and hedges, the dense Umbrella Cedars, Jacarandas, Palms and Peppers predominating in thousands. Along the roads, headlands and ditches, Jersey cows are tethered, some of the best to be seen anywhere, in fact, Mildura and districts will always be remembered by the writer for its quality milking cows, and for its scarcity of poultry.

Lucerne, Prarie Grass, Melilotus, Clovers, Paspalum, Trefoil and Water Millet grow profusely on these lands, wherever there is soakage or moisture.

Hay is made of these grasses in the surplus period and conserved for Winter fodder. Before the water schemes, these lands only grew Spinifex, Blue Bush, Saltbush, snakes and ants, and were practically uninhabited except on the near river fronts.

Mildura District Water Schemes.

The most northern city of Victoria is the heart or business centre of productive "Golden Sunraysia."

The river, sun, soil, and seasons are nature's most wondrous gift to man, all are interdependent on each other, to be turned into food and drink, and, incidentally, to gold.

Fifty-one years ago the Chaffey Bros., Mr. Deakin and others conceived great possibilities for these areas, under irrigation. At that time there was a dried up population of half a dozen.

Now 25,000 folk are living in comparative luxury and contentment. Employing as well, an army of pickers at harvest time, all earning good wages.

Prior to the days of the Chaffeys, anyone was welcome to these lands almost for the taking.

The crux of the whole success is the raising of the river water (which is now locked) to such levels that the fertile, thirsty lands can be watered from the channels by gravitation.

In the near vicinity of Mildura, water for irrigation purposes is first diverted from the river at "Psyche Bend" Pumping Station, 7½ miles upstream from the town, the pumps at this station discharge into King's Billabong, a natural reservoir. This was originally connected to the main stream at both ends, the connecting canals have been dammed up to retain the water pumped in.

On King's Billabong there are two separate plants. One raises water 90 ft. to the channel, supplying several thousand acres, the other raises water 50 ft. to channels, for the lower lands of a few hundred acres.

The bulk is lifted to higher levels at Nichol's Point Pumping Station. At this station, which is situated on 50 ft. channel about 2½ miles from Billabong, 75 per cent. of the water is raised to main 70 ft. channel, which commands most of the area, the remaining water is raised to the 85 and 92 ft. levels.

These water schemes are only made **permanently** possible by the **locking** of the Murray River.

A comparatively small pumping plant, right at Mildura, raises water direct from river to irrigate some hundreds of acres on either side of Deakin-avenue.

Also the urban pump station for town supply is right here. This water is purified before entering the reticulation service, and is charged for on a flat rate; under these terms, residents use plenty of water for gardens and domestic purposes.

These irrigation schemes referred to come under the Mildura Irrigation Trust.

These stations at peak periods supply or pump in the aggregate 181,000 gallons per minute, or would cover 363 acres a foot deep in 24 hours.

Red Cliffs has the mammoth outfit, said to be one of the world's largest; this is not included in above figures.

Merbein Station discharges 3,000,000 gallons per hour, lifting the water 80 ft.

These two come under the jurisdiction of the Victorian State Rivers and Water Supply. Then Curlwaa and Coomealla, with each a plant under the N.S.W. Water Commission.

After the culture made possible by irrigation, we reach the last links in the business—the packing, grading, and processing of these fresh and dried fruits by the co-ops. and packing houses, who place the fruit on the world's markets in the best possible condition, each distinctive label being a guarantee of the pack.

The visitor approaching Mildura for the first time by train, looks out of the window and sees huge packing houses with names on roofs ond walls and thinks that he had arrived at his destination, but finds upon enquiry that he has another station or two to go, for both proprietary and co-op. companies are "at home" in all these fruit growing centres.

The Mildura Co-op. Co. Ltd. has established itself very substantially, and built mammoth packing and trading houses in Irymple, Mildura, Merbein and Curlwaa, N.S.W., and handle fruit of all description, from the surrounding districts. The only centre where the company has not erected a packing house is Red Cliffs, but quite a deal of business is transacted with folk from there.

This co-op. company, with small beginnings in 1903, became the successor of the Mildura Fruitgrowers' Association; is now the largest trading and processing concern in North Victoria, disbursing to its shareholders handsome dividends annually, as well as benefiting the growers by its extensive field of co-operative buying, selling and economic working.

The company was incorporated on October 31, 1904, then at that Christmas time came a severe heatwave, with shade temperature over 120 deg for several days, consequently most of the crop was literally burnt on the vines—bad luck for a start.

The "pool pack" was inaugurated in 1905, always benefiting growers alike It has since been adopted by all co-op. growers throughout the industry.

In 1910 the company built a packing house at Curlwaa, N.S.W., and in 1912 one at Merbein. These districts just coming into bearing.

Recently a new brick building, with all concrete floors, has been built at Merbein, to process the fruit. This building has a depth of 385 ft., with frontage 180 ft. to Main-avenue.

Architecturally constructed for stability, perfect lighting day or night, ventilation sanitation, accessibility in or out.

The receiving doors are on the south side and railway on the north.

This spacious, airy theatre gives the visitor, when looking inside, an impression of miltary precision. The stemmer and grader is placed to deal expeditiously with the rush of fruit, the automatic weigher, mechanical presses, wiring machines, roller conveyors, etc., particularly rejoicing the mechanically minded.

Wherever economies can be used in producing the famous "Padlock" pack they are carried out.

Mr. J. A. Rickard is manager of the Merbein branch. Mr. D. C. Winterbottom, general manager of Mildura Co-op. Fruit Co. Ltd., Messrs. A. L. Johnstone, Chairman since 1922, a director for 33 years; A. S. Lockhead since 1922; E. J. Casey since 1920; J. P. Power since 1934; L. O'Donell since 1935.

Brand's Jordan Almond tree on the property of Mr. Armstrong, Red Cliffs, Vic.

The above gentlemen are all 100 per cent. co-operationists, being highly esteemed and loyally supported in their vast responsibilities, by the growers.

In addition to handlers of dried fruits with a 350 tons a day capacity, the company packs 70,000 cases of citrus per annum.

In conjunction, the **by products** factory is a buyer of Lemons, Oranges, Grapefruit, Apples, Quinces, Apricots

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A section of the Irymple Packing Shed, Merbein, Vic.

Peaches, Plums, Melons, Tomatoes, etc. in any quantity. These are turned into mixed peel, jam, fruit cordials, marmalade, sauce, soup, etc.

Each and all of these branches manufacture by hand and machinery, boxes and containers for fresh and dried fruit, supplying all orchard requisites, manures, sprays, implements and machinery, grain, chaff, etc., to the blockers.

Finance, all branches of insurance, and advice is at the disposal of the blocker through his own co-op. company.

The tourist by road or rail from Melbourne, to far north-west Victoria (the former via Calder Highway), after travelling about 335 miles, enters the vinelands of Sunraysia.

For many miles previous to this, one passes through the grey, dry lands of the Mallee, of which Ouyen may be termed the centre (now connected by rail via Murrayville with Pinnaroo, S. Aust.).

What a change after the wearying dullness of the Mallee.

On reaching **Red Cliffs town**, the visitor stops on the highway and views the huge packing houses, pipeworks, and railway station on the left, shops of town on the right (west and east respectively).

This self contained town is the centre of the most famous of all ex-soldier settlements, radiating for 5 miles all round, with vineyards and groves, of which these A.I.F. men are justly proud.

On entering the town to the right, is the perfectly kept town square, or park, of dense green lawns, gorgeous flower beds, shade trees with seats, soldiers' memorial and 80 ft. water tower in centre, a Virginia creeper climbing and encircling this concrete structure.

A splendid land guide which can be seen for miles around.

Bordering the park on the north is Indi-avenue, one of the main thoroughfares, at the west end of which, facing Calder Highway, is a handsome Cairn, erected to the memory of the late Hon. Percy Gerald Stewart, who served his country faithfully, both in the State and Federal spheres.

This well kept avenue of lawns and trees, on which centrally situated is the post office and principal business places, cuts the town in two, continuing on to the River Murray and mammoth pumping station.

The State Schools are overflowing with scholars, over 700 attending, with many more under 6 years of age to keep attendance up in the district.

Red Cliffs is connected with Mildura 10 miles away, by a fleet of motor buses, running hourly with ½ hour service at peak times; something similar obtains with Merbein and Mildura.

Surrounding Red Cliffs town, there are many red sandy rises, all cultivated to vines and citrus; owing to these physical features, the channels, roads, and tracks follow the levels and contours.

Shelter trees have been planted on all these highways and tracks, making for seclusion and beauty.

It is stated that no more land will be available for fruit culture in these areas, consequently a conservatism has been set up. Planted blocks are worth big money, and remember, this place is only in its early 'teens.

All Sunraysia water schemes are specifically designed to supply the **fruit grower direct** with water **for irrigation**; as soon as pumps start operations, irrigating begins on sections of blocks. This is quite unlike many other places, where stock and domestic supply take priority.

In some other places and districts, water is conveyed by channel over scores of miles, taking many days, before reaching the orchardist, who suffers in seasons when water is scarce.

If happiness ha'e not her seat
And centre in the breast,
We may be wise, or rich, or great,
But never can be blest.—Burns.

Another wise man ends spray hose trouble

Spray hose trouble says "Goodbye forever!" — when *Dunlop* Spray Hose comes on the scene.

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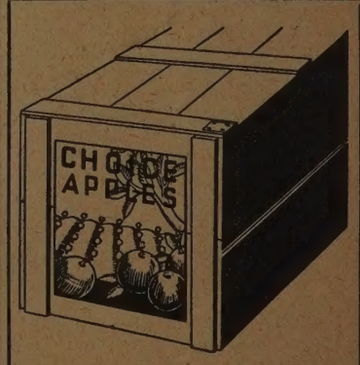

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THE CITRUS INDUSTRY

The Handling and Storage of Citrus Fruits

IMPORTANCE OF CAREFUL HANDLING WHEN PICKING AND PACKING — SHED HYGIENE AND MOULDICIDAL EXPERIMENTS — COLORING CITRUS FRUITS.

Important Tests by Council for Scientific and Industrial Research.

EXTENSIVE PROGRAMMES of investigation of the handling and storage of Navel and Valencia Oranges, Emperor Mandarins, and Grapefruit, have again been carried out by the Council for Scientific and Industrial Research, and the Departments of Agriculture of N.S.W., Victoria, and S.A., working in close co-operation through the Citrus Preservation Technical Committee. Only those experiments carried out directly by the Council are described below.

Both **Valencia Oranges and Washington Navels** are susceptible to non-parasitic disorders which are apparently attributable directly to reduction of temperature in store. Susceptibility is greatest in early picked fruit and decreases with increasing maturity. Non-parasitic rind disorders appear generally to constitute the main hindrance to successful export of Valencias, with the possible exclusion of those from Gosford; and the problem, therefore, consists in an investigation of critical storage temperatures for "storage spot" production at different stages in the maturity of the fruit.

In addition to non-parasitic rind disorders, Washington Navels are, unfortunately, also susceptible to a number of rots, the chief of which are:—(i) green mould (Pencillium digitatum), (ii) blue mould (Pencillium italicum), (iii) stem-end rot (Phomopsis and Diplodia spp.), and (iv.) septoria rot (Septoria depressa).

On the home market, fruit from districts other than Gosford is comparatively free from rotting in normal circumstances, and the same may be said of experimental fruit held in land store. On the other hand, a period of abnormally wet weather will predispose fruit with excellent keeping quality to rots, and the effect is accentuated when rain is accompanied or followed by heavy winds. In Australia blue mould (Pencillium italicum) is comparatively unimportant, rotting more usually being due to green mould (P. digitatum). Stem-end rot (Phomopsis citri) is responsible for an appreciable amount of wastage in stored fruit from the New South Wales coast. In commercial shipments to U.K., rotting commonly occurs in Navel Oranges from all districts in Australia, though not to an equal extent.

Citrus wastage due to rotting is not directly attributable to cool storage, since the bulk of the infection occurs in the field. Neither is it possible to control it by refrigeration alone, for the reason that temperatures, to be effective in this regard, must be reduced to such a point that non-parasitic disorders become inevitable. It is necessary, therefore, either to eliminate infection or to render it innocuous duirng the pre-storage period. This can be done, in theory, by reducing the amount of inoculum at certain critical points in the chain of handling and storage, by avoiding injury to the fruit, and by the use of so-called "sterilising" solutions. A considerable amount of time has been devoted to these aspects of citrus preservation.

Citrus Packing House Investigations. Wounding—Detection, Effects and Prevention.

In a report on Australian citrus packing houses recently issued by the Committee, it was stated that **commercial handling and general hygiene are, in general, given very little attention, and that apparently their importance as factors in citrus wastage is not appreciated.** It was noticed that fruit was frequently wounded during picking and in transport to the shed, and again during processing and packing within the shed itself.

It was decided to determine quantitatively the extent of wounding; this was done by the use of tannin and ferric chloride solutions, which deposit ferric tannic within the wound and thus render it conspicuous.

The result of this investigation showed that only 4 per cent. of coastal fruit tested escaped rind abrasions, and that 19 per cent. of the wounding occurred during picking, 34 per cent. during transport in field boxes, and the remaining 43 per cent. occurred in the packing shed.

Fifty per cent. of the wounds were of the rub type resulting from friction, a type that permits of rapid infection, since the external walls of the oil glands are removed and penetration by mould organisms via the oil glands is much more readily accomplished than through inter-gland tissue.

In a subsequent experiment, **the use of wood wool in field boxes reduced wounding** during picking and transport by some 40 per cent.; while elimination of prominent points of injury in the shed plant was responsible for a further reduction of 33 per cent., showing in all a total decrease of 73 per cent. in the number of fruits wounded.

The method of wound detection by ferric chloride was found to be time-consuming and exacting, and more recently a very satisfactory method was evolved. This consists in absorbing into the wound certain dyes such as Auramine (I.C.I.), which cause the wound to fluoresce brightly when irradiated with ultra-violet light.

In addition to its effect on mould wastage, wounding is thought to accelerate loss of moisture from the fruit, thereby inducing wilting and general loss of condition. A recent experiment to test this theory was conducted co-operatively with Mr. E. G. Hall (N.S.W. Dept. of Agriculture) using fruit intentionally wounded, control fruit, and fruit waxed at the cut stem to retard possible moisture loss. Included in this experiment was a further batch of Oranges treated with borax, since it had been previously noted that borax treated fruits show a marked tendency to wilt earlier than non-treated. Moreover, it is well-known that the practice of dipping Apples in acid solutions for the removal of spray residue is responsible for wilting. **The results showed that borax treatment significantly increased moisture loss as compared with all other treatments, that increase in moisture loss due to wounding was probably significant, and that retardation of loss by paraffining the cut stem was also probably significant.**

Early in 1937, a large-scale experiment with Valencia Oranges was undertaken in co-operation with the N.S.W. Dept. of Agriculture to determine the

Efficacy of Waxing

on moisture loss and maintenance of condition. Four treatments included wax, borax, borax and wax, and control; the fruit was stored at 40 deg. F. and at 50 deg. F. For this and subsequent experimental work, the waxing plant at the packing shed of Niagara Park Growers Ltd., N.S.W., was modified to conform as nearly as possible with Californian (U.S.A.) equipment capable of applying wax by the hot fog method. Post-storage examination **demonstrated the superiority of waxed fruit,** and it was evident that boraxed fruit was more wilted than that of any other treatment.

Shed Hygiene and Mouldicidal Experiments.

In the majority of Australian citrus houses, no effort is made to ensure freedom from atmospheric contamination; and exposure of agar plates have shown that the amount of infective material in the atmosphere is very high indeed. On a number of occasions, processing experiments have been carried out to gain data on the efficiency of various materials in solution as mouldicidal agents. Up to the present, borax treatment has invariably given excellent results, and almost complete control of mould wastage even when fruit has been inoculated with spores of P. digitatum prior to treatment. **None of the other materials used are comparable with borax in the degree of control exerted.** It was shown, however, that borax does not possess any residual effect, and that re-contamination of the fruit after treatment will result in wastage.

In consequence of favorable reports received from California, regarding the mouldicidal properties of nitrogen trichloride gas, wounded, inoculated, and unwounded Washington Navels from Gosford were intermittently fumigated over a period of seven weeks at 70 deg F. A control lot of fruit was held without gas treatment for a similar period. On examination it was found that **nitrogen trichloride reduced the amount of wastage in wounded fruits by 76.2 per cent and in control fruits by 58.5 per cent.** No control whatever was exerted in the case of inoculated fruits, which were found to be completely wasty after six days in store.

The use of nitrogen trichloride for immediate gassing of fruit on its reception at the packing shed should prove of benefit to the fruit gassed, and indirectly beneficial since it is apparently an excellent fumigant for general shed disinfection purposes. Unfortunately, nitrogen trichloride is a dangerous explosive, and though apparatus is available in U.S.A. for its safe application, it has been ascertained that there is no possibility of releasing it commercially in Australia in the immediate future.

Throughout the course of

Citrus Preservation Work,

it has been patent that fruit from the Gosford coastal area shows much higher mould wastage than that from the inland areas. It was originally thought that these differences were due entirely to difference in resistance inherent in the fruit. It was, therefore, decided to test this possibility by direct inoculation of fruit from Griffith and Gosford using average daily increase of the surface area of the lesion as a measure of resistance. This method is a modification of that used by Rees Davies (Low Temperature Research Laboratory, Capetown, South Africa) who determined the margin of the lesions by pressure. It was found, however, that this could be done with greater accuracy and without damage to the fruit by visual examination under ultra-violet light. For the preliminary experiment small numbers of Valencia Oranges were used, and differences between Griffith and Gosford were probably not statistically significant. In conjunction with the N.S.W. Dept. of Agriculture, this work has now been repeated on a larger scale with Washington Navels, and the results tend to confirm those previously obtained. It would appear that the greater amount of mould wastage experienced in Gosford fruit is not due to any inherent factor, but rather that greater opportunity for infection occurs in the coastal districts.

Coloring Citrus Fruits (in Co-operation with the N.S.W. Dept. of Agriculture).

This process is favored commercially for the marketing of early Washington Navels and re-greened late Valencia Oranges; but in N.S.W. it has been, and still is, conducted in a very haphazard manner in many centres. It should be possible with correct conditions of humidity, temperature, ethylene, and carbon dioxide concentration, to color the fruit in from two and a half to four days, yet in a number of instances some six to eight days are required for the process. Long coloring periods are to be deprecated if marketing is delayed, because of the rapid propagation and extension of mould growth throughout the stack. It was consequently decided to institute inquiries into the methods practised. These revealed that of the seven rooms examined, only two were constructed and operated in such a manner as to permit the maintenance of constant conditions.

Storage of Citrus Fruit (at Melbourne in Conjunction with Victorian Dept. Agriculture).

Washington Navel Oranges. — The effects of maturity at the time of picking, storage temperature, and various pre-storage treatments on the duration of life, have again been investigated with Washington Navel Oranges from various localities in N.S.W., Victoria and S.A. The various determinations have included measurements of respiratory activity, juice and acid content, palatability, and color. The optimium storage temperature is dependent on the maturity of the fruit at the time of picking, the locality from which the fruit has been gathered, and the conditions to which the fruit has been subjected between the time of picking and placing in store.

Mid-May appears to be the earliest satisfactory picking time for fruit from most of the districts, the duration of life of this maturity being about twelve weeks at 45 deg. F. Delaying the picking time usually reduces the subsequent duration of life by approximately the additional length of time the fruit has been allowed to remain on the tree.

Certain pre-storage sweating treatments have been effective in controlling subsequent rind defects at 40 deg. F., but equally good results have been obtained by immediate storage at 45 deg. F. The duration of life appeared to be influenced to some extent by the type of stock on which the fruit has been grown.

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of palatability, and mould wastage was only of importance after this stage. In the Gosford (N.S.W.) fruit, mould wastage occurred prior to the loss of palatability.

The rate of respiration of Navel Oranges increased four times by a rise of temperature of 10 deg. C., the corresponding value for Valencia late Oranges being 2.4. An increase in temperature, therefore, should reduce the duration of life of Navel Oranges much more than that of the Valencia late Oranges.

Navel Oranges picked towards the end of July have more flavor at picking time than those picked previously. **For Oranges subjected to a period of storage of six to eight weeks at 45 deg. F., however, those picked early in June develop the best flavor by the end of the storage period.** Early-picked fruit generally improves in flavor during storage, while later-picked fruit tends rapidly to lose its flavor. As a higher acidity can be tolerated in Oranges with a good flavor, it is suggested that a higher acidity might be allowed in earlier than in later shipments. The rate of loss of acid in store is about 2.5 per cent. per week, and is independent of temperature within the range 40 deg. to 50 deg. F.

Gas storage has not been found applicable to this variety of Oranges as deterioration in flavor has occurred. The presence of amounts of carbon dioxide above 10 per cent. in the storage atmosphere results in a rapid increase in the alcoholic content of the juice.

Valencia Oranges.

The results with Valencia late Oranges have indicated that considerable wastage is caused through faulty methods of picking and handling prior to storage. It would seem that much more attention should be given in the future to this very important aspect of the citrus industry, and that some experiments should be conducted to demonstrate in a practical way the advantages to be gained by careful attention to pre-storage methods of handling and treatment.

Valencia late Oranges stored at 40 deg. F. appear to be susceptible to storage spot in the pre-climacteric stage and for about three weeks after the climacteric. Control may be effected by first storing the fruit for about three weeks at 50 deg. F., prior to storage at 40 deg. F., or by delaying the picking time.

Grapefruit: Experiments on Grapefruit are being carried out, but insufficient progress has been made as yet to justify any conclusions being drawn.

Common Oranges: The duration of life obtained with common Oranges from Gosford (N.S.W.) has been relatively short compared with that of the Washington Navel Orange. The various varieties of common Oranges used as experimental material for the past two years have been very susceptible to storage spot.

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Citrus Culture

GREEN MANURES — IRRIGATION INVESTIGATIONS — MANURING — ALTERNATE BEARING OF VALENCIA ORANGES.

Experiments by C.S.I.R. on Citricultural Research Station, Griffith, N.S.W.

The Griffith Research Station was established twelve years ago in an extensive area of horticultural crops under irrigation, states the annual report of the Council for Scientific and Industrial Research. Citrus is a major product of the district, and the station has 34 acres of Oranges which serve for experiments in green manuring, fertilising, bud selection, citrus preservation, etc. In recent years attention has been paid to irrigation design and practice, and to more fundamental soil studies. Methods have been developed which will allow the rapid application of this information throughout the area when the soil survey conducted by the Council's Division of Soils is completed.

The N.S.W. Irrigation Commission contributes £1,250 per annum towards the working expenses of the station. Very helpful contact is also maintained with the Griffith Producers' Co-operative Co. Ltd., especially in the provision of special cool storage facilities.

Green Manure Investigations: It has been found that a winter-growing, leguminous, green manure such as tick beans considerably increases the growth and yield of citrus trees. The influence of the green manure is noted very early in the life of the tree. Summer-growing green crops for green manure, such as cow peas, are not so effective, as the competition of the crops for soil moisture offsets the beneficial fertilising effects.

An extensive survey shows that the green crops cause an increase in the nitrate content of the surface soil after the crops are ploughed under. However, where the soil is kept clean-cultivated and no green manure crop is grown, the total amount of nitrate throughout the root zone is greater than when green manure crops are grown. The beneficial effect of the green manure crop, therefore, is not explainable on the basis of simple nitrogen nutrition. It is also found that heavy dressings of inorganic nitrogenous fertilisers fail to have the same effect as leguminous green manure crops.

Besides this distinct fertilising effect, continued use of green manures has certain beneficial effects on the soil. After soils have been under cultivation for some time, the original structure of the soil is destroyed. The effect is to make the soil appear heavier, and it becomes less easily cultivated and less permeable to water. Continued use of green manure tends to protect the soil against this serious loss of structure. Thus the soil of the green manure plots is now more easily worked, and will absorb irrigation and rain water much more readily, than will the soil of the clean-cultivated plots. The most suitable Winter-growing leguminous crop to use for green manure is tick beans.

Irrigation Investigations: The amount of water used in irrigation often departs widely from the optimal range possible under practical conditions, with resultant injury to the plant, and, in the case of excess water, possible severe damage to the soil. Resultant reduced growth and yields are particularly serious where establishment costs are heavy, as in vineyards and orchards. The rational application of irrigation water, however, is a much more complex problem than appears at first sight. Controlling factors, such as soil, slope, and lay-out, vary greatly both between farms and within individual farms; and irrigation practice must be varied accordingly.

Fertiliser Experiments: The fertiliser requirements of citrus trees are being studied, both from the point of view of the effect on the size, yield, and health of the trees, and on the quality and chemical composition of the fruit. **The soil can supply sufficient mineral nutrients when the trees are young; but mature trees require heavy dressings of nitrogenous manure.**

Alternate Cropping of Valencia Orange: Not only does the objectionable biennial bearing of Valencia Oranges lead to marketing difficulties, but the fruit of the light year crop tends to be over-large and coarse, while the fruit of the heavy year is often unduly small. It has been found that by removing some of the fruit of the heavy year crop while still small, the crop of the following year is increased. It has been found, however, that removing some of the fruit early has very little effect on the ultimate size obtained by the remaining fruit. **Allowing fruit of the heavy crop to remain on very late (until February) slightly decreases the size of the fruit of the next crop, and slightly decreases the number of fruit set at the next heavy crop.** These are important findings in view of the custom of allowing some fruit to hang late to supply a good market in late Summer. Carrying out the practice on the heavy crop year tends to reduce the unevenness of the crops and the excessive size of the fruit the following light crop year. The effect of the time of application of nitrogenous manures on the alternate bearing habit is being studied.

Other investigations include cold storage of citrus fruits, frost, permanent pastures, salt problems, and soil temperatures.

CITRUS FOR N.Z.

Mr. J. E. Thomas, representing the N.Z. Government Internal Marketing Department, who recently visited Australia, stated that from May 1 the N.Z. Government would handle the whole of the importation of citrus from all sources into the Dominion.

Yearling Pears growing in the nursery of C. J. Goodman, Bairnsdale, Vic.

N.S.W. CITRUSGROWERS' DEFENCE ASSOCIATION.

A meeting of the Executive of the above Association was held at Gosford on March 12. There were present Mr. W. J. Black (chair), Messrs. R. Hill, G. Turnbull, V. S. Fagan, F. Bryant, A. W. Best, H. C. Yarnall, G. O. Maher, A. C. Waddell, R. H. Best, A. Ghersi, R. Roughley, W. Schwebel, A. Bailey, C. Kaiser, R. W. Younger, and the Secretary, H. Gordon Bennett.

Orchards Tax.—The Secretary read the correspondence sent to the Premier, Mr. Horsfield, Secretary of U.A.P., Messrs. Ross, Walker and Shand, M.'s.L.A., and their replies. The letters forwarded by this Association complained that the decision of the U.A.P. Conventions to submit to the growers a poll on the recission of the Orchard Tax had been ignored. The Premier had submitted the matter to a Royal Commission for enquiry, thus ignoring the decision of the Party. In his reply, the Premier referred to "The divergent representations received from many sources on this subject." The meeting considered that a poll of growers would solve the strength of these representations, while a Royal Commission could not.

Requests for some definite action prior to the State Elections failed to draw any definite reply.

Mr. Gillespie, the Independent Candidate for the local electorate, addressed the meeting. He gave it as his opinion that the people should be free to conduct their business without interference by Boards. He favored a poll of the growers on the Orchard Tax question.

Market Opening Hours.—Mr. Maher (Lisarow) reported on the appearance of himself and Mr. May (Hawkesbury River) on behalf of the Association at the conference arranged by the City Council to discuss the opening hour of the City Markets. They advocated market opening at 7 a.m. Mr. Jenkins had stated that both agents and growers agreed on 7 a.m. as the opening hour.

The City Council had decided the opening hour would be 7 a.m. for 6 months.

There was a discussion regarding the change of name of the Association to include all fruitgrowers, but this was deferred till next meeting.

WASTAGE IN ORANGES.

A New Method of Control.

A new method has been evolved which markedly controls wastage in citrus caused by Diplodia stem-end rot and Pencillium mould. The method is to place on the stem end by means of a pipette a drop of a disinfectant composed of 13 g. iodine, 10 g. potassium iodide, water 200 c.c., alcohol 800 c.c. Other disinfectants (of which the composition is given) were also tried with somewhat contradictory results. The method is quick and inexpensive, and suitable for large scale shipping consignments. At present, however, there is an embargo on the entry into the U.K. of fruit treated by such substances.—"Imperial Bureau of Fruit Production Bulletin."

AMERICAN ORANGES FOR U.K.

Lower Duties Requested.

A request has been made to the British Government by the California, Florida and Texas Citrus Growers' Association to obtain, through the Anglo-American trade agreement, the elimination of the British import duty on U.S.A. Oranges during the season when South African and other Dominion preferential Oranges do not enter the British market.

The growers have also asked for a fixed rate of duty for United States imports in other months, instead of the present 10 per cent. ad valorem rate, on the grounds that the ad valorem rate provokes a valuation argument.

Our grand business undoubtedly is not to see what lies dimly at a distance, but to do what lies clearly at hand. Courage, brother. Get honest, and times will mend.—Carlyle.

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Vegetable Culture

IMPROVEMENTS WANTED AT VICTORIA MARKET — DUSTING TO GET RID OF GRUBS IN CABBAGE AND CAULIFLOWER — CELERY CULTURE INCREASING IN VICTORIA — THE PASSING OF THE CHINESE MARKET GARDENER — ATTEND TO DRAINAGE.

(By Our Correspondent.)

At the last meeting of the Committee of the Victorian Vegetable Growers' Association, it was agreed to approach the Markets Committee of the Melbourne City Council with a request that an entrance be made to the new sheds which have recently been erected over near the Fruit Market. When these sheds were erected, it was stated by the Markets Committee to the Growers' Advisory Committee that those shops facing Peel and Queen streets would be built of such a nature that they could easily be pulled down if necessary.

The Growers' Advisory Committee to the City Council Markets Committee, is appointed, by election of their respective industries every three years, and these appointments are confirmed by the Lands Department. Those acting at the present time are Mr. C. C. A. George, representing the Vegetable Growers' Association, Mr. Aspinall representing the Fruit Growers and Mr. Thompson who represents the Fruiterers. Their duties are to confer with the City Council Markets' Committee on all matters such as building new sheds or alteration to existing buildings.

The entrance which is needed will take away one shop at the top and bottom of the newly-erected sheds to give easy access for vehicles and pedestrian traffic, as the position now stands all traffic entering these sheds has to take a sharp lefthand turn which makes a great deal of congestion, so we are hoping that the Council will now honor their promise.

Grubs in Cabbage and Cauliflowers.

Now that Cauliflowers and Cabbage are well struck away it is very necessary to watch them closely for the small grub which attacks the hearts and checks the growth; it is impossible to get a good result if these pests are allowed to remain in the leaves for they attack the heart, and as the leaves grow out they are all holed through.

The best method of combating this pest is to dust them with arsenate of lead.

There are several firms who mix this powder: a 50 per cent. mixture seems to be the most effective, put on with a blower which is carried on the back: a pump action is used, with a handle in the side. It is necessary to pick a calm day and then a crop which is half grown can be dusted for five shillings an acre.

Be sure to get the dust right into the heart: it is not necessary to dust the outside leaves for this pest always works from the heart. These dustings should take place every ten days, starting from twenty days after the plant is put out.

Celery Culture.

Celery is again being grown very extensively in Victoria. Forty years ago Celery was one of the chief crops in vegetable gardens around Melbourne, it used to grow very prolifically without any trouble from pests of any kind, but then the rust took control and there was no known remedy, so Celery was gradually given up by European growers until only the Chinese used to attempt to grow it at all. During the last ten years Chinese growers have practically gone out of existence owing to the fact that those men who were engaged in the industry have grown too old, and there have been no young Chinese coming on for the wives of all these men were left in China, and there were no new ones allowed into Australia. In passing—just a word of praise for the Chinaman. He never forgets a good turn done to him, and on the average is a very honorable man, and probably a much better immigrant than some who are allowed into Australia to-day.

But to finish our talk on Celery. The time has again arrived when many vegetable growers are turning their attention to Celery and growing it in large quantities very successfully. A powder containing bluestone and copper is procurable which controls the rust, and it is now quite a safe crop to grow, and I anticipate it will not be many years before the whole of Victoria's needs will be grown here instead of importing large quantities from South Australia as we do now.

Of course, the Victorian growers have copied the idea of the South Australian growers and bleach their crop and use boards each side of the row, to make the Celery white, a system which is much easier than the old idea of mounding earth to the plant as it grew: this entailed much hard work, and of course, a good distance had to be left between the rows so that enough earth could be pulled to the plant, now, however, under the present system of boarding the crop, twice as much Celery can be grown to the acre, as was previously possible.

It is still quite a good time to plant Celery out, but the easiest time to grow this crop is to plant it out early in January.

It is a crop which needs a great deal of water and will not stand being allowed to dry out.

Attend to Drainage.

As we are now drawing on to the wet season of the year it is advisable to see that **drainage systems** are in order, particularly is it necessary to see that the surface water will run off the lands, for if water is allowed to run into a dip in the land and stop there, it runs the land together and no crop will do any good where the water does this.

The best method of ensuring that the surface water will run out is to have the lands in short lengths, not longer than two chains, and by taking out a headland at each end, the earth taken out to make this track can be put on the land so as to give a fall which will ensure the quick getaway of water after a heavy rain.

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PORTLAND TOMATOES.

Interesting and Helpful Competitions.

THE results of the Portland Tomato Growing Competition were announced at the beginning of last month.

Judged by Mr. Basil Krone (Chief Fruit Packing Instructor, Department of Agriculture), as having the best acre of Tomato plants grown in the bush form, Mr. P. G. Orchard and Mr. D. McMillan obtained first and second respectively, obtaining 74 and 72 points out of the possible 75. Other competitors were very close, with Messrs. Parker Bros. 71, E. W. Burris 70, R. A. Brooks 69, and G. W. Parker 67.

Mr. J. Allan, 73 points, was the winner of the best ¼ acre of Tomato plants grown on stakes, with Mr. E. W. Burris, 70 points, second. Other results were as follows:—Messrs. D. McMillan and G. W. Parker 69 points, C. F. Wedding 66 and 65 points.

Points judged were productiveness and commercial value, freedom from disease, broken plants, etc., and freedom weeds, condition of soil. Hundred per cent. points were obtained by practically all competitors in freedom from weeds and condition of soil.

Stewards appointed were R. D. Patton (Secretary, Horticultural and Agricultural Society), and M. Barrett (Secretary Tomato Growers' Assn.).

Pumpkins and Squashes

BREEDING IMPROVED VARIETIES.

THE PRINCIPAL VARIETIES of Pumpkins grown in New South Wales are Triangle (or Triamble), Queensland Blue (or Beaudesert), and Crown, reports the Director of Plant Breeding, N.S.W. Department of Agriculture. On account of the necessity of cross fertilisation for the development of fruit in this crop, nature has lavishly endowed it with easy facilities for the purpose, and has thus rendered it difficult to preserve a sufficiently good uniformity to maintain the character and qualities of the variety type.

In an endeavour to do this the above-mentioned varieties have been submitted to selection in close breeding plots in which sib-pollination (i.e., pollination between brother and sister plants) only can take place,

At Bathurst Farm last season a closebred line of Triangle was outstanding in yield, uniformity and type. Further selection in this line is being made for keeping quality, fresh color, and cooking quality. After another generation or so of close breeding in this line, it is expected that seed of it will be available for field testing. Similar results have been achieved at Hawkesbury Agricultural College with Crown Pumpkin, and at Glen Innes Farm with Queensland Blue.

As well as improving the standard type of Queensland Blue at Glen Innes, the Plant Breeder is attempting to isolate a pale blue, smooth-skinned type which is considered to be superior to the ordinary rugged Queensland Blue.

A strain of Crown Pumpkin designated for the time being Clarence Crown, has been selected at Grafton Farm. This Pumpkin carries the high quality of the old Ironbark, but has the advantage of a softer skin. The average weight is 7-8 lbs., and it is excellent in cooking quality. It is, however, not of the best keeping quality, and it is somewhat late maturing in comparison with Queensland Blue.

There is undoubtedly a place for an early maturing soft-skinned Summer Pumpkin, and an attempt is being made at Grafton Farm to produce such a variety by using an early variety, Buttercup, from America, in crosses with local varieties, chiefly Queensland Blue.

The American Squash, Table Queen, which is of excellent quality, is also being used as a parent in crossing on the long Vegetable Marrow, with the object of securing a new Marrow of the latter type with superior flesh color and quality.

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Investigation on the Storage—— Ripening and Respiration of Pears

Color, Pressure and Chemical Composition at Picking

By G. B. Tindale, B.Agr.Sc., S. A. Trout, M.Sc., Ph.D., and F. E. Huelin, B.Sc., Ph.D., in "Journal of Agriculture," Victoria (abridged).

(Continued from March issue.)

Effect of Temperature on Storage Life.

The length of storage life of the main varieties of Pears at various temperatures is recorded in Table I.

The longest storage life was obtained at the lowest storage temperature, i.e., 30 deg. F., in the case of the W.B.C. variety. As there is a certain amount of risk attached to the use of a temperature of 30 deg. F. owing to freezing injury, **the best results would be obtained by using a storage temperature of 30 deg. to 32 deg. F.**

More records on the effect of temperature on the length of storage life have been obtained with the W.B.C. than with the other varieties. Over the range 30 deg. to 45 deg. F., the storage life of the W.B.C. Pear is decreased by one-fifth for a rise in temperature of 2 deg. F. The storage life of the other varieties over the range 32 deg. to 37 deg. F. is decreased by one-fifth for a rise in temperature of 3 deg. F.

The Effect of Temperature and the Time of Picking on the Storage Life of Pears.

Variety.	District.	Picking.	Date of Picking.	Lngth of Storage Life (Months) at— 45°F.	37°F.	36°F.	34°F.	32°F.	30°F.
W.B.C.	Shepparton	—	January 29	—	1½	2	—	3½	—
	Doncaster	First	January 29	—	1½	—	—	3	—
	Doncaster	Second	February 6	½	1½	1½	2½	2½	3½
	Doncaster	Third	February 14	—	1½	—	—	2½	—
Howell	Doncaster	First	February 2	—	2½	—	—	4	—
	Doncaster	Second	February 15	—	2	—	—	3½	—
	Doncaster	Third	February 27	—	1½	—	—	3	—
Bosc	Doncaster	First	February 19	—	2½	—	—	4	—
	Doncaster	Second	March 3	—	2	—	—	3½	—
	Doncaster	Third	March 17	—	1½	—	—	3	—
Comice	Doncaster	—	February 23	—	—	—	—	4	—
Madame Cole	Doncaster	—	March 9	—	—	—	—	4½	—
Anjou	Doncaster	—	February 16	—	—	—	—	4½	—
Packham	Doncaster	First	February 19	—	3½	—	—	5	—
	Doncaster	Second	February 26	—	3	—	—	4½	—
	Doncaster	Third	March 9	—	2½	—	—	4	—
Winter Cole	Doncaster	First	February 25	—	4½	—	—	6	—
	Doncaster	Second	March 10	—	4	—	—	5½	—
	Doncaster	Third	March 24	—	3½	—	—	5	—
Josephine	Doncaster	First	March 3	—	4½	—	—	6	—
	Doncaster	Second	March 17	—	4	—	—	5½	—
	Doncaster	Third	March 31	—	3½	—	—	5	—
Winter Nelis	Doncaster	First	March 6	—	5	—	—	6½	—
	Doncaster	Second	March 20	—	4½	—	—	6	—
	Doncaster	Third	April 9	—	4	—	—	5½	—

Effect of Maturity on Storage Life.

From Table I. it will be observed that three pickings of most varieties were made extending over a period of approximately four weeks. In spite of this difference in picking maturity it was found with each variety, except the W.B.C., that the storage life of each picking terminated a the same time, the actual date being dependent on the variety. Thus the actual length of the storage life of the third picking was approximately four weeks less than that of the first picking. The flavor on ripening of the last picking, however, was excellent, but that of the first picking was only fair, and that of the second picking very fair.

The storage life of the third picking of the W.B.C. Pear at 32 deg. F. was terminated one week before that of the earlier pickings. In this variety the period between removals which ripened normally and those which developed core breakdown was relatively short, and it was possible to determine the storage life with greater accuracy than with the longer keeping varieties.

Effect of Size on Storage Life.

It is generally assumed that the larger fruits do not keep as well as the smaller. An experiment to determine the effect of size on the keeping properties of W.B.C. Pears was carried out, three pickings being made from Doncaster and one from Shepparton. Each picking was graded into three sizes, viz., 2¼-in., 2½in., and 2¾-in., and comparable lots were stored at 30 deg., 32 deg., 34 deg. and 36 deg. F. Measurements of color, pressure, and chemical composition at picking time indicated no differences between the three sizes of one maturity. **The length of storage life of the three sizes was the same, and no differences in color or pressure were observed, either during storage or ripening.** The shorter storage life, which has been attributed to the larger fruit, is probably due to this fruit usually being the more mature.

Effect of Delayed Storage.

Experiments were conducted to determine the effect on the subsequent storage behaviour of delaying the cool storage of Pears after picking. W.B.C. Pears were picked at **Shepparton**, received at the experimental chambers the following day, and given various delayed storage treatments. The following results were obtained:

Treatment.	Length of Storage life. Weeks.
Stored immediately at 32 deg. F.	13
Kept at 75 deg. F. for 2 days then stored at 32 deg. F.	5
Kept at 75 deg. F. for 4 days then stored at 32 deg. F.	1
Kept at 65 deg. F. for 2 days then stored at 32 deg. F.	6
Kept at 65 deg. F. for 4 days then stored at 32 deg. F.	4
Kept at 65 deg. F. for 6 days then stored at 32 deg. F.	1
Kept at 55 deg. F. for 3 days then stored at 32 deg. F.	6
Kept at 55 deg. F. for 6 days then stored at 32 deg. F.	4

From this table, it will be seen that an additional delay of two days at 65 deg. F. after picking (in the immediately stored controls one day elapsed between picking and cooling) reduces the storage life of the W.B.C. Pear to six weeks and makes overseas export impossible. Although no delayed storage experiments were carried out with the other varieties of Pears, sufficient evidence has been obtained from other experiments to indicate that delaying the storage would considerably reduce the storage life. In these varieties, an additional delay of two days at 65 deg. F. would probably reduce the storage life by one-third, compared with one-half for the W.B.C. variety.

It is therefore essential that Pears should be cooled as soon as possible after picking, and this factor requires the closest attention in their export.

The temperatures used in this delayed storage experiment were chosen because they cover the range of temperatures which usually prevail during the Pear-picking season, as the following records taken from the meterorological data (10) indicate:—

Shepparton.

	Jan.	Feb.	Mar.
Mean. Max.	87.0	86.5	79.3
Mean Min	59.0	59.4	54.5
Average	73.0	73.0	67.0

Doncaster.

	Jan.	Feb.	Mar.
Mean Max.	78.0	78.1	74.4
Mean Min.	56.7	57.2	54.7
Average	67.0	68.0	65.0

Physical and Chemical Changes During Storage.

When a Pear is picked it is still a living organism, taking in oxygen and liberating carbon dioxide produced by the combustion of the reserve materials of sugar, etc., which have been built up while the Pear is growing on the tree. In addition to these chemical changes, certain physical changes in color and firmness of the flesh color during storage. All these changes were investigated.

Changes in Respiration.

From the time of picking until scald develops in store, the Pear is taking in oxygen and liberating carbon dioxide, a process called respiration. The amount of carbon dioxide liberated is dependent on the variety of the fruit and the temperature at which the fruit is stored. The amount of carbon dioxide liberated by most of the varieties of Pears was collected at several temperatures and measured; the rate of carbon dioxide production increased up to a certain point and then diminished. **The point of maximum respiration is termed the climacteric.** When the climacteric was passed, the respiratory activity fell very rapidly until it eventually reached a point where no carbon dioxide was liberated. This marks the death of the Pear, the fruit being discolored in the flesh and skin and having a disagreeable odour and taste.

In all varieties, except the Winter Nelis, the storage life terminated a considerable time before the climacteric was reached, and the climacteric occurred some time before disorders actually developed in the fruit

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in store. The Winter Nelis Pears were fully ripe at 37 deg. F. and partially ripe at 32 deg. F., and in consequence they could be kept in store for a relatively longer period, as they merely had to hold their condition for a marketable period after removal. The relation between length of storage life and time to reach the climacteric and time to develop scald or mould in store is recorded in Table II. Scald developed in all the varieties except the Winter Nelis, which ripened at the low temperatures and developed mould in the overripe stage.

The length of storage life of all varieties except the Winter Nelis was approximately three-fifths of the time to reach the climacteric and two-fifths of the time to reach scald. This shows how relatively short is the "commercial" storage life of the Pear compared to its actual length of life in store. There is no method of determining when the climacteric occurs, other than by continuous measurements of carbon dioxide output.

Table 2: The Relation between Length of Life, Time to Reach the Climacteric and Time to Develop Scald or Mould in Store.

Variety.	Temperature.	Length of Storage Life.	Time to Reach the Climacteric (Days)	Time to Develop Mould or Scald.	Length of Storage Life. Time to Reach Climacteric.	Length of Storage Life. Time to Develop Mould or Scald.
W.B.C.	30 deg. F.	105 days	180	260 days, Scald	0.6	0.4
	32 deg. F.	84 days	140	200 days, Scald	0.6	0.4
	37 deg. F.	42 days	70	105 days, Scald	0.6	0.4
	45 deg. F.	12 days	18	30 days, Scald	0.6	0.4
Howell	32 deg. F.	119 days	215	300 days, Scald	0.5	0.4
	37 deg. F.	77 days	123	210 days, Scald	0.6	0.4
Bosc	32 deg. F.	119 days	236	262 days, Scald	0.5	0.5
	37 deg. F.	77 days	126	151 days, Scald	0.6	0.5
Packham	32 deg. F.	147 days	194	330 days, Scald	0.7	0.4
	37 deg. F.	98 days	129	240 days, Scald	0.7	0.4
Winter Nelis	32 deg. F.	182 days	188	240 days, Mould	1.0	0.7
	37 deg. F.	119 days	122	165 days, Mould	1.0	0.7

The Relation Between Temperature, Respiration and Length of Storage Life.

Kidd and West have found with Apples that a rise in temperature has the same effect in increasing the maximum and minimum values of respiration as in reducing the duration of life, and that the same amount of carbon dioxide is liberated at each temperature, from the time of gathering until the termination of storage life by fungal attack.

With W.B.C. Pears Kidd and West found that the storage life of Apples was reduced 1.5 times for a rise in temperature of 10 deg. F., i.e., half the amount by which the varieties of Pears other than the W.B.C. are reduced for the same rise in temperature.

Cool Storage Investigations

Interesting Results With Tasmanian Apples Reported by C.S.I.R.

THE COOL STORAGE of fruit is one of the many items dealt with in the very interesting annual report of the Council for Scientific and Industrial Research. Regarding the storage of Tasmanian Apples the following is stated regarding fruit of the 1935-6 season: Investigations concerning the relation between the incidence of storage disorders and physiological and chemical tests on samples collected previous to, and at the time of, picking, climatic conditions, as well as storage temperatures and other storage factors were continued. The technique previously reported was employed. The chemical and physiological tests gave results which confirm the conclusions reported for 1934-35 and 1935-36. The 1935-36 season was one of the above-normal temperature and below-normal rainfall. On the basis of the data derived from these observations, a quite accurate forecast was made of general keeping quality and the incidence of storage diseases for this season's fruit on the overseas and local markets.

Investigations on the effect of **pre-storage treatment with carbon dioxide** as a means of preventing low-temperature breakdown, as well as experiments on the effect of storage temperatures, the concentration of respired carbon dioxide in the storage chamber, and delay in storage on the incidence of storage diseases, were continued and extended.

Pre-storage treatment of 50 per cent. carbon dioxide for 36 hours was sufficient to induce brown heart in Sturmer and French Crab, but not in C.O.P., Scarlets and Jonathan.

True low temperature breakdown occurred only in Scarlets in the later pick, when the treatment prevented pit breakdown in C.O.P.; and Jonathan spot may have been increased and deep scald in Sturmer induced by treatment. Increase in the concentration of respired carbon dioxide in the storage chamber appears to increase liability to brown heart, induce Jonathan spot in mature Jonathan, and reduce incidence of late scald in Sturmer.

The incidence of storage disorders during this season was as follow: — Storage pit was more prevalent than in 1935, but not as severe as in 1934; light crops again suffered most. True low-temperature breakdown was not common; and the type which follows pit, water core or bruising was the most pronounced. No difference was apparent between fruit from limed or unlimed plots. The season was one of low liability for deep scald and Jonathan spot. The relative varietal susceptibility to brown heart was Sturmer most, then French Crab, and Jonathan least. Susceptibility to brown heart was lower than in 1935; and French Crab was the only variety in which alcoholic poisoning developed.

Mrs. Dinks: "What I say to you never seems to bear any fruit."

Mr. Dinks: "It might if you pruned it a bit."

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FAIR CROPS OF WASHINGTON NAVELS AND VALENCIAS SHOWING FOR 1938 CROP — EXPORT TO NEW ZEALAND — SUCCESSFUL CENTENARY CELEBRATIONS AT GRIFFITH — GRAPE AND PRUNE HARVESTS — APPLE CROPS CLEAN.

(By Our Correspondent.)

VALENCIA ORANGES are now practically finished, probably some hundreds of cases still remain on a few farms, but the total amount will very soon be cleared off.

Prices have, however, been fairly high, and the quality of the fruit has been maintained, although somewhat reverting in colour.

The Griffith Producers Co. has had four teams going at full strength on the fumigation of citrus, with a determined effort to clear out the Red Scale pest, which has been so weakened by the continued spell of hot weather. Other contractors are also at work, and some growers have fumigated with their own plants.

The Autumn growth is now showing up well on all citrus blocks, and there is evidence of a fairly good crop of both Navels and Valencias already showing on the trees.

The Prune crop is now finished, with the exception of a few trays still out, and it has turned out better than at first anticipated. Robes were inclined to be light, and the quality is good and the fruit large in consequence. D'Agens are inclined generally to be on the smaller side, although some very fine samples have been observed.

The Apple crop, of which the principal variety is the Granny Smith, is coming up to expectations, and the fruit is of particularly fine quality, and mostly free from Codling, as most growers have become fully aware that the Departmental regulations will be strictly enforced, and no fruit showing any signs of a sting will be passed for export.

Some exceptionally fine crops are to be seen, and those growers who have exercised the necessary care have fully proved that Codling Moth can be practically controlled, and an examination of the fruit on the tree with regular picking off of any affected fruit is proving one of the best forms of control of this pest, combined with the use of the fruit pit, and regular sprayings.

Many thousands of cases have been exported from the Area this season, and further shipments will be made, and at a later date the final figures will be available.

The inspection has been very rigid, and fruit showing any signs of sun scorch has been rigidly excluded.

Trade With N.Z.

A visit of significance and importance to these Areas was that of Mr. J. E. Thomas, of the New Zealand Internal Marketing Bureau, who, accompanied by Messrs. Souter and Hunter, of the Department of Commerce, made an inspection of the various packing sheds on the Area, with a view to entering into negotiations for the importation of citrus fruits to the Dominion during the coming season.

Mr. Thomas stated that it was the intention of the N.Z. Government to regulate the imports of citrus fruits both as respected quantities and prices paid, so that the consumers could obtain this very necessary commodity at reasonable prices.

Cook Island Group, and a small amount of citrus fruit from the northern portion of the Island are the only sources of supply with the exception of that imported from the United States, and the prices ruling in New Zealand have been too high for the bulk of the population to purchase citrus fruits in the quantities that should be available. It is hoped that tenders will be called for, which will give the growers here a reasonable and payable price for their fruit, and at the same time build up an increased market in the Dominion for our fruit, thus relieving the local markets, with the chance of enhancing prices on the city markets and country trade.

The position was very clearly placed before this Officer by the Directors of the various packing sheds visited, and it appears likely that tenders will be invited for supplies for the coming season, as the acute shortage of these necessary fruits is being felt severely.

Grapefruit and Lemons are grown to a small extent in New Zealand, but the citrus industry there is never likely to assume the necessary proportions to supply the local demand.

Griffith Centenary Celebrations have attracted hundreds of visitors from all parts of the Commonwealth, and constant expressions of pleasure and amazement have been expressed at the extraordinary development of the town and country round in the short time since its inception.

All hotels, of which there are now three in Griffith, and all boarding-house accommodation was taxed to the fullest extent, and many visitors who had not booked up were compelled to find accommodation in the adjoining townships of Yenda and Whitton.

The town was made gay with long strings of flags and coloured lights, and prior to the official opening of the Celebrations the town lights were turned off.

As a signal rocket rose from the Central Park, the light was switched on and a blaze of coloured lights lit the streets and buildings that were illuminated.

Numerous sporting events were staged throughout ten days of festivity, and the procession of floats was a theme of the most favourable comment. Representing almost every activity of the area, rice, fruit, harvesting were staged in the most artistic manner, and the floats representing the wine and other important industries of the Area were shown to the greatest advantage.

An escort of the local troop of 21st Light Horse, under the command of Lieut. F. G. Beverley, met the Governor at the station, and escorted him to the Civic reception at the Wade Shire Office, where representatives of all the leading organisations were presented to His Excellency.

It was a matter of particular interest that the Hon. A. Griffith, after whom the town was named, was able to be present and see for himself the culmination of project which he was principally instrumental in commencing, and it must have been a matter of great pride to him to see his foresight so fully materialised.

At the complimentary dinner tendered to His Excellency, Lord Wakehurst, Mr. Griffith was accorded an ovation when he rose to speak in proposing the toast of the District.

The numerous Rice paddocks are now showing up well in grain, and are giving promise of another bounteous yield, many of the visitors who had never before seen rice growing were astonished at the magnificent crops; the vivid green of these paddocks, standing in water, were a tremendous contrast after the miles of dry scrub which has to be traversed before the oasis of the Irrigation Areas is encountered, and with the other huge irrigation schemes now under construction, an enormous change will be wrought in the next decade.

Pasture paddocks and irrigated cereal crops extend for many miles beyond the fruit farm areas, and the vista seen from the top of Scenic Hill is one never to be forgotten.

Grapes.

Most of the Waltham Cross variety have been harvested, but there is a large crop of Cornichons yet to handle, and with the influx of visitors to Sydney, prices have firmed this season.

Ohanez Grapes have been, and still are, being packed for export to the East, but the acreage under this class of Grape is not large, and the berries are inclined to be small, although of good quality.

The vines of this variety grown on the overhead trellis are showing a marked superiority over those on the standard type of trellis, and those growers who still retain any quantity of Ohanez Grapes are altering their trellises to train the vines higher. It is noticed that the higher trellised vines are freer from disease, and also from the characteristic scald for which this variety is particularly liable.

On Saturday, 19th inst., a complimentary social was held to bid farewell to the Hon. Hugh Main, Minister of Agriculture, and was largely attended. Messrs. Nock, the Federal Member for the district, and Mr. Hankinson, the State Member, were both present.

After numerous speakers had paid tribute to Mr. Main's splendid record of service during the six years which he has occupied the position of Minister of Agriculture, a presentation was given to Mrs. Main from friends and supporters.

Mr. Main is retiring from politics, for the time being, but many of those present voiced the sentiments that he would appear again in the Federal sphere, where his undoubted integrity and courage of opinion would be welcomed.

N.S.W. SHOWS.

Oberon.—The winner of most of the awards for leading varieties was Mr. A. Buckley, who showed Delicious, Five Crown, Granny Smith, dessert and cooking Pears, Clingstone and Slipstone Peaches, Plums and Tomatoes. Mr. J. Pidgeon obtained awards for his dessert Apples and Red Plums.

Maitland.—Mr. D. W. Taylor was the winner of the sections for collection of fruit, Packham's Triumph and dessert Pears, Lisbon Lemons, Persimmons, Grapes and Emperor Mandarins. Mr. A. W. Dennis obtained awards for Lemons judged on peel value and Peaches, Passionfruit and Granny Smith Apples.

Braidwood.—Pomme de Neige and dessert Apples grown by Mr. V. Cook; cooking, Granny Smith, by Mr. G. Stewart; Jonathan, Delicious, Dunn's, and collection of dessert Apples by Mr. A. W. Routleley, Rome Beauty, and Five Crown, by Mr. L. Byrne; and dessert Pears, Peaches, Quinces, Oranges and Lemons by Mr. W. Mather, won the leading awards at the Braidwood Show.

WAKOOL IRRIGATION DISTRICT.

A large meeting of landholders within the Wakool Domestic and Stock Water Supply and Irrigation District met Mr. W. Rawlings, Commissioner of the Water Conservation and Irrigation Commission, at Moulamein recently.

In answer to question, the Commissioner replied that the cost would be some thousands of pounds less than originally estimated, although the work would not be completed for about eight more months than originally allowed for. The position was entirely satisfactory when one took into account the depression recently passed through. He also told of similar American schemes of irrigation and compared them with the comparatively liberal treatment being meted out by the Government.

About 240 miles of the 330 miles of channels necessary to serve the 536,724 acres within the area are completed. Approximately 363,000 acres are being served now, and 27,400 water rights have been allotted out of the 40,615 provided for. About 75 per cent. of the holdings in the district are being supplied. Water will not be provided for irrigation for commercial orchards or vineyards, or rice growing, but is for the growing of fodder for stock in times of low rainfall and for domestic purposes.

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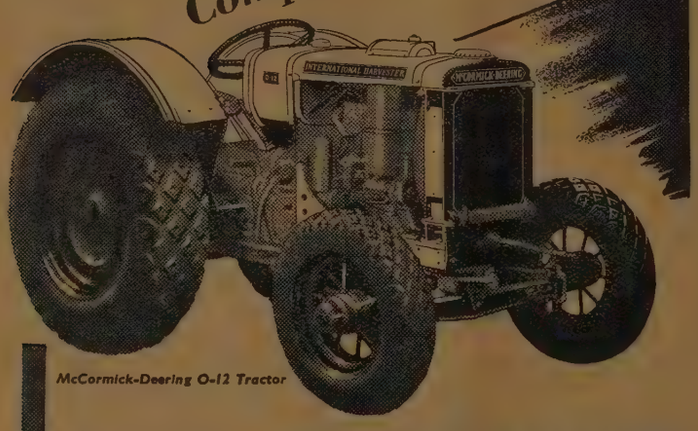

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Banana Industry in N.S.W.

INTERESTING HISTORY SINCE CONTROL OF BUNCHY TOP AND ESTABLISHMENT OF MARKETING BOARD.

£7,000 SPENT ON SYDNEY RIPENING ROOMS.

TO MARK THE OPENING of the new Banana Ripening Rooms at the City Markets, Sydney, the Banana Marketing Board tendered a dinner on March 8 to representatives of the industry, Officers of the Department of Agriculture, and kindred associations.

The director of Marketing, Mr. A. A. Watson, traced the rehabilitation of the industry after the Bunchy Top debacle. The new ripening rooms had cost £7,000. He hoped agents would find marketing boards were not the menace to their existence as was once thought. The Banana industry had the only fruit marketing board in N.S.W.

Mr. H. A. Stevenson (Chairman of the Board), said he believed Bunchy Top was under control. The Board would make the fullest use of agents who could give good service to growers.

DURING THE EVENING the history of the Banana industry was traced. From small beginnings the area developed to 5,468 acres in 1922. The ravages of Bunchy Top reduced the area to 1,504 acres by 1925. Vigorous action by the Banana Growers' Federation and the Department of Agriculture stamped out Bunchy Top, then big crops from new plantations caused marketing problems. Statistics revealed the following:—

Year.	Area, Acres.	Production, Cases.	Farm Value £	Average Sydney price per Tropical Case.
1925	1,504	60,763	47,090	—
1930	3,340	117,120	107,840	23/8
1931	4,959	216,756	139,090	16/9
1932*	7,127	343,427	181,730	16/1
1933*	11,275	533,560	326,810	17/9
1934*	17,438	691,627	340,050	15/7
1935*	16,072	993,165	306,220	11/3
1936*	13,029	1,006,118	331,180	11/10
1937*	13,373	1,009,626	563,700	16/–

*Year ended March 31.

The Banana Marketing Board was established in 1935 after a poll of the growers. Ripening facilities were provided at Lismore at a cost of £1,000. The existing ripening rooms at Coff's Harbour were utilised by arrangement. The Sydney ripening plant cost £7,000, and the one at Hobart £300.

In the pool period for the year ending June 30, 1937, the Board handled on consignment 575,000 cases of Bananas, realising £409,827 gross, the nett return to growers was £294,912, or 10/3.1 per case.

The Board's operations for the year showed a surplus of £5,068. The levy of 3d. per case from agent's remuneration more than paid for the expenses of the Sydney Branch Office.

Reduced Imports from Fiji.

The Commonwealth Government had decided that since 1932 not more than 40,000 centals of Fiji Bananas could be imported annually, at a duty of 2/6, plus primage and sales tax. In 1933-34, 10,584 centals had been imported; last year the total was 1,050 centals.

"Life is not so short, but there is always time for courtesy."

STRAWBERRY CULTURE IN N.S.W.

Threatened with Extinction unless Root Rot Conquered.

Plant Breeders are at Work to Produce Resistant Varieties.

STRAWBERRY GROWERS in N.S.W. are faced with the extinction of their industry if the increasing inroads of Root Rot disease are not checked by some means, states the Director of Plant Breeding, N.S.W. Department of Agriculture. Already the once-thriving commercial areas in the Parramatta-Ryde-Eastwood district have largely disappeared, and the disease has now found its way into new areas such as Liverpool and Kurrajong. The difficulty is to provide uninfected plants which will serve as a source of healthy stock for new plantations from which the disease could be excluded for a few years.

In a progressive effort to obtain varieties of improved quality and productiveness, the best commercial varieties of America and other countries have been introduced during recent years, but one by one they have succumbed to infection by Root Rot. It is difficult to determine whether there are any varieties which have any real resistance to the disease. Observations during several years are necessary to determine this, for some varieties have remained free from the trouble for a year or two, but have eventually become attacked.

Mr. Shirlow, Assistant Plant Breeder at Hawkesbury Agricultural College, who has been making these observations, states that a variety called French's, obtained by a local seedsman from a Queensland grower, seems to hold out against Root Rot infection for a longer period than all other varieties which have been under observation to date, but it can hardly be regarded as having a high degree of resistance to the disease. This variety produces long light red berries, of fair quality. Some seedlings of a cross between Fendelcino and British Sovereign are producing good crops with very little disease at the College, but it is not likely that they are resistant to Root Rot, probably having so far merely escaped infection.

Mr. Shirlow has also used one of the wild species of Fragaria from which the cultivated Strawberry originated, viz., F. Chiloensis, and which appears to have resistance to Root Rot in crosses with British Sovereign and French's, in the hope of obtaining resistance in a commercial type. Although the seedlings show good disease resistance, none of them have produced berries of commercial value, and they will have to be back crossed to commercial varieties.

In the absence of inherent resistance, it is possible that the most effective control of Root Rot may be the raising of plants of new seedling varieties with commercial qualifications in a district free from the disease.

N.S.W. Fruit Industry Enquiry

EVIDENCE has been taken in various districts by Mr. J. E. McCulloch, Fruit Industry Enquiry Commissioner.

Mr. Fitzroy Brand, manager of the Producers' Rural Co-operative Society, reported that although the Society's membership in 1929 was only 230, to-day the total was 503, thus showing that growers were coming to realise the value of co-operation. In 1928, the reserve and undivided profits of the Society were £2,206, which had increased to £8,580 by 1937. The total assets of the company last year were £27,011. The turnover in the trading section had increased to £52,263 from £20,937 in 1928. The bonus to shareholders last year amounted to £983, while the freight turnover (forwarding section) was £22,672.

Mr. Brand favored limiting the number of agents, praised the Fruitgrowers' Federation, supported the continuation of the Orchard Registration Tax, and considered any appearance of prosperity was due to growers receiving good prices many years ago, the present prices not leaving very much for a grower's family. His Society considered that fruit should be examined on the trees, in the cases, and at the ship's side. He reported that an effort to establish an industry for drying President Plums in the Orange district had been unsuccessful.

Mr. Daniel Hawke, Pinnacle-road, considered that Apples in deep soil bore profitably until 40 years old, and Cherries until 50 years. Apples took seven years, Plums three, Pears nine, Cherries ten or eleven, and Grapes four, to bear profitably. Ten to twelve acres was the maximum area one grower could operate. The number of agents should be reduced, and the marketing system improved.

Mr. Edgar Harrison had found that he could keep 150 to 200 sheep on his orchard throughout the year. He deemed £80 per acre for improved pome land, and £90 for Cherry land a fair price.

Mr. A. Offner said that Black Spot was the most troublesome disease during the wet periods. To cover the costs of production prices ranged from 4/- for Plums to 7/- for Apples and Pears. To neglect spraying for Cherry slugs meant trouble the following year. He considered competition was essential for the good of the industry, £50 an acre was a fair price for well-founded Cherry and Apple orchards.

Mr. J. T. Cantrill, a district grower of 68 years' experience, said that £50 per acre was a good price for well-established orchards. He considered that there should be a proportional system of voting in the Orchard Tax, to which he had no objection; there were too many agents; he had had no difficulty in obtaining casual labor.

Mr. Nicholas King said that Apples grew and yielded well at 50 years, Pears 60, Plums 35, and Grapes from 30 to 40 years. A man could not look after more than 15 acres properly; the construction of contour drains checked erosion; Sydney agents should be reduced by two-thirds, and an improvement in the marketing system was necessary.

The Banana Trade.

Concerning the Banana industry, limitation was suggested as a means of protection against over-production.

Mr. Alick Buckley, Secretary of the Banana Growers' Federation Co-op. Society and the Banana Growers' Federation of N.S.W., said that the co-operative society was so much alive to the necessity of improved ripening facilities for Bananas that it was financing the Banana Marketing Board to the extent of £6.000 for the construction of properly-equipped rooms in Sydney. Limitation of production was advocated to prevent gluts.

The rooms were practically ready for use, the capacity being 3,300 cases a week, with provision for extension to double this.

Mr. Julian Orlov said that the 7½ per cent. commission, plus 1/- per case ripening fee charged by Sydney agents was exorbitant. He considered that a clause similar to the one in the Act operating in Queensland should be included in the N.S.W. Marketing Act, so that growers could give a decision before any major alteration of policy could be adopted.

Strawberry Culture

Preparation of the Land.

THE STRAWBERRY is a very shallow rooting plant and rarely develops its roots below 10 inches. Thorough preparation of the land prior to planting is of great importance, and will more than compensate the grower for any extra work involved.

All persistent weeds, such as Couch or Paspalum, should be eradicated, or they will give endless trouble after the beds are established. The land should be ploughed or dug to a depth of 8 to 10 inches, and given a dressing of blood and bone at the rate of 11 cwt. per acre or a heavy application of fowlyard or stable manure. Bush rakings or other bulky organic matter that will rot readily are beneficial, it being generally recognised that little benefit can be derived from commercial fertilisers if there is an absence of rotted organic matter in the soil.

The foregoing operations should be completed at least six or eight weeks before planting. Prior to planting, however, the land should be given another ploughing and working, and then kept in good condition until actually planted. Any surface drains that are required to prevent erosion of the soil should be put in before the plants are set out in the beds.

The most popular time for planting is from April to May. Planted at this time, the plants have a chance to become well established in time to produce the main crop. Planting can, however, be carried out up till the end of August. If the Winter is wet, late plantings often give the best results, provided the plants are grown for more than one year.

The fourteen-page illustrated pamphlet, "Strawberry Culture," from which the above paragraphs are taken is obtainable free on application to the Department of Agriculture, Box 36A, G.P.O., Sydney.

BANANA BUNCHY TOP.

Outbreak at Yarrahapinni, N.S.W.

Prohibition of Planting and Removal of Banana Suckers.

The N.S.W. Minister for Agriculture (Hon. Hugh Main. M.L.A.), announces that, owing to the prevalence of Bunchy Top at Yarrahapinni, it has been decided that, until further notice, no permits will be issued for the planting or removal of Banana suckers in the parishes of Yarrahapinni and Barraganvatti, County of Dudley, and the parishes of Warrell, Congarinni, Allgomera and Unkva, County of Raleigh. This prohibition will remain in force until such time as the disease is completely eradicated from the plantations.

This timely advice is given in order to prevent growers in the areas concerned from incurring expense in preparing ground for planting next season.

Green Manuring the Orchard

One of the most important aspects of maintaining soil fertility is to ensure that the soil contains an abundance of organic matter or humus, and, during the late Summer or early Autumn months every orchardist should give attention to the sowing of cover crops for subsequent ploughing in as green manure. Green manure crops add a great deal of organic matter to the soil, and also prevent losses of plant food materials which would be leached from the soil if the crop were not grown. Generally speaking, leguminous cover crops, such as Cowpeas, Lupins, Field Peas, and Vetches are to be preferred for green manuring purposes, since in addition to supplying an abundance of organic matter, they enrich the soil in nitrogen. This latter is a very important consideration, since nitrogen is known to be the main plant food which governs the profitable production of many classes of fruit.

New Zealand Blue Lupins, or Purple Vetches, are ideal cover crops for sowing in coastal orchards during the early Autumn. These crops should always be sown early so that they will be well advanced before the cold Winter weather begins. From 1 to 2 cwts, of superphosphate together with 1 cwt. of chilean nitrate of soda per acre should always be sown with these crops.

It was at one time thought that leguminous crops would not respond to the use of a nitrogen fertiliser. This idea was due to the well-known fact that legumes such as Peas, Beans, Lupins, Vetches, Clover, Lucerne, etc., develop small nodules on their roots which contain bacteria that are able to take the nitrogen out of the air and convert it into a from that can be utilised for plant food. It appears, however, that in many cases these bacteria do not function satisfactorily during the early stages of the plant's growth, and accordingly very beneficial results have been obtained by applying a dressing of a readily soluble and quick-acting nitrogenous fertiliser along with the seed.

For several years a number of growers in the Gosford (N.S.W.) district and elsewhere have been using 1 cwt. per acre of Chilean granulated nitrate of soda in this way, and very pronounced beneficial effects on the growth and vigor of the crops have been obtained. In cases where Barley, Oats or other cereal crops are being grown for green manuring purposes, it is essential that a dressing of a quick acting nitrogenous fertiliser such as Chilean nitrate of soda should be applied if the best results are to be obtained.

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A satisfactory paste for the application of labels to fruit cases is made as follows:—

Take 1 lb. of flour, ½ oz. alum, and 1 pint water. Mix into a thick paste and then add boiling water until the paste thickens, stirring all the time. If too much boiling water is added, making the paste too thin, boil slowly, adding a little more flour. If to be used immediately the paste can be made without the alum, or by adding a small quantity of bluestone as a preservative can be kept for short periods. If bluestone is added, use only an enamel or glass paste container to prevent corrosion.

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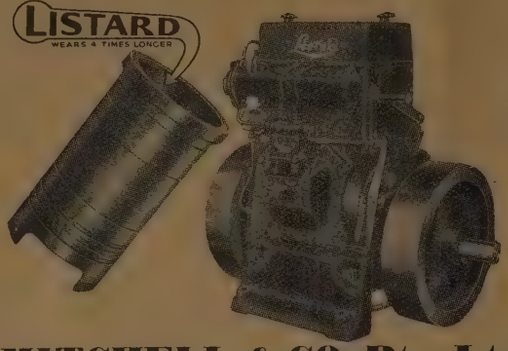

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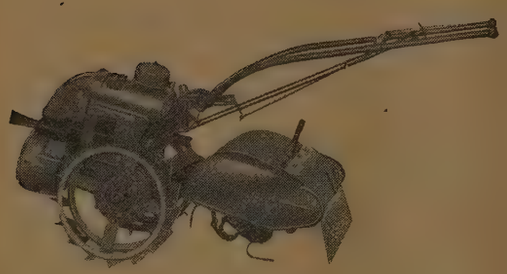

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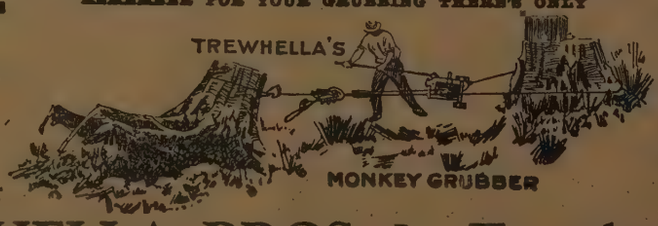

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Western Australia

The Fruit Fly Problem.

The fruit fly problem was discussed at a recent meeting of the Bridgetown Fruitgrowers' Association. Mr. Geo. Parke, of Donnybrook advocated statutory powers for the Fruit Fly Board to compel spraying. He quoted the opinion of Mr. Newman (Government Entomologist) that if every grower were compelled to spray the pest could be wiped out.

Mr. Flintoff admitted that extreme seriousness of the fruit fly menace in the metropolitan district, where the pest bred continuously and harbored even in rose seeds. The fly did not carry over in the Bridgetown district because they were five months without fruit. In surrounding areas, however, the fly went from Loquats to Peaches, then to Pears.

Mr. J. McNeil Martin said he knew of 2,000 cases of Granny Smith Apples being rejected for export because of being thick with the fly.

Mr. Parke said that without statutory powers they were at a deadlock.

WESTERN AUSTRALIA.

Why Eastern fruitgrowers, particularly those of Tasmania, continue to send fifty different varieties of Apples overseas, most of which are definitely unprofitable, and make it necessary for the delegates to the Apple and Pear Conference to spend half a day discussing the deletion of certain varieties is beyond the Western Australian growers, according to a discussion at a recent meeting of Westralian growers.

The fact remains that although Western Australia is not worried about the export of so many varieties, she is indirectly concerned. If Australian fruit has a bad name through the failure of certain varieties to arrive in good condition, the State is forced to take the knock with the States chiefly concerned.

This season W.A. has a light Apple crop. The trees are "having a rest." But far-seeing George Wickens, their capable Superintendent of Horticulture, forecasts that for the following year the crop should be in the vicinity of between 1¾ and 2 million cases!

All the more reason why the educational publicity campaign should be continued vigorously now.

An American and an Englishman were having an argument about who had the greater strength. The American said that every morning before he had his breakfast he pulled up 90 gallons of water from his well. "That's nothing," replied the Englishman, "every morning before I have my breakfast I get a boat and pull up the river."

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Correspondence Invited.

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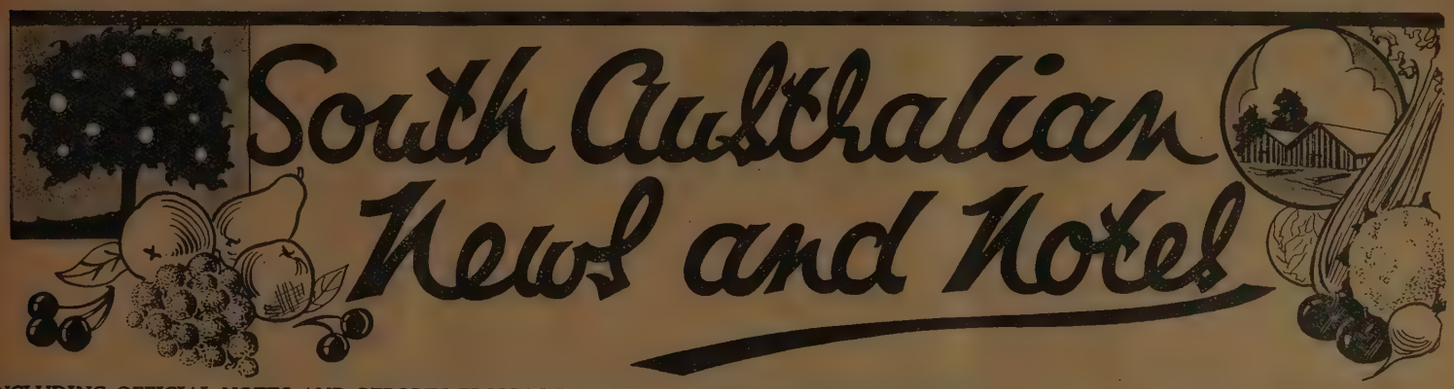

INCLUDING OFFICIAL NOTES AND REPORTS FROM THE SOUTH AUSTRALIAN FRUITGROWERS' & MARKET GARDENERS' ASSOCIATION.

The South Australian Fruitgrowers' & Market Gardeners' Association

MEETING OF EXECUTIVE COMMITTEE.

THE March meeting of the Executive of the above Association was held in the Board Room on March 25, 1938, at 10.30 a.m.

The President (Mr. W. J. Bishop) presided, and those present were Messrs. C. W. Giles, W. H. Ind, C. H. Ragless, F. G. Gill, F. Hughes, N. T. Hobbs, H. N. Wicks, A. J. Hollister, H. H. Schultz, T. Playford, M.P., G. J. Strange, L. J. Wicks, A Elliott, I. R. Adams, C. W. McRostie, E. Giles, and Secretary. Apologies received from Messrs. J. Turner, C. Ridley, H. B. Robson, F. A. Wicks, R. Cramond, A. C. Gibson, and J. G. Potts.

Correspondence.—Received from H. De VRoom, Russel Island, A. G. Strickland, re proposed amendment to Grading Regulations and forwarding Statement of Fruit held in cold storage as at the end of January in N.S.W. and S.A., Royal Agricultural and Horticultural Society of S.A soliciting special prizes for Fruit Packing Competitions at this year's Show in September next; D. G. Wills (Sydney) Pty. Ltd., forwarding market reports; John A. Johncock, Klemzig, Hansford Reeve & Co., Brisbane, re market reports; Committee of Direction of Fruit Marketing, Brisbane; Fruit Industry Sugar Concession Committee re cool storage of canning Pears; Mrs. L. J. Cowell, returning thanks for expressions of sympathy in her recent bereavement; Messrs. A. G. Cameron, Norman Makin, C. A. S. Hawker, F. H. Stacey, Jas. McLachlan, Jr., P. A. McBride, J. L. Price (2), M. Casey, Federal Ministers, re Prune Bounty; W.A. Market Gardeners' Association seeking information.

Mr. H. N. Wicks moved, supported by Mr. H. Schultze, that correspondence be received and dealt with. Carried.

W.A. Market Gardeners' Association.—Mr. W. H. Ind moved that Secretary reply to this letter pointing out Sectional work, and enclosing a copy of the rules. Seconded Mr. F. Hughes. Carried.

Grades for Apples.—A motion, "That this matter be handed on to the Apple and Pear Section" was moved by Messrs. N. T. Hobbs and W. Ind. Carried. Mr. F. Hughes moved "That the regulations be displayed in the office." Seconded Mr. C. W. Giles and carried.

Royal Show. — Mr. C. W. Giles moved "That Association donate special prizes for Apple Packing at the 1938 Royal Show." Seconded Mr. H. N. Wicks. Carried.

Exhibitors.—Mr. H. N. Wicks moved "That we recommend to the Royal Agricultural Society, that the matter of Exhibitors showing fruit grown only by themselves in their gardens be enforced." Seconded Mr. F. Hughes. Carried. Mr. N. T. Hobbs moved "That we protest to the Royal Agricultural Society re the pilfering of Exhibits while in the Society's care, and ask that steps be taken to protect the exhibitors." Seconded Mr. C. Ragless. Carried.

Henry de VRoom, Russell Island.—Mr. H. Schultze moved, supported by Mr. L. J. Wicks, "That the President and Secretary supply information required." Carried.

Mr. T. Playford, M.P.—Mr. T. Playford, who was again returned at the recent State Elections, was congratulated by the President, stating that the Association was a non-political body, but was always appreciative of the services rendered the Association so willingly by Mr. Playford. His only regret was that two other good workers for the Association, in Messrs. R. Hunter and F. C. Staniford, had been defeated. Mr. Playford thanked the President for his kind remarks, and hoped that the Association would always remain non-political. He paid a tribute to his opponent, Mr. R. Hunter, stating that he had never before experienced such a friendly campaign. It was always his desire to help the Association in every way possible, he concluded.

Melbourne Market Representative.—The President then welcomed Mr. C. W. McRostie, Melbourne Market Representative.

Mr. McRostie thanked the Chairmain for his welcome, and stated that various S.A. products were developing very satisfactorily in Melbourne, and he was willing at any time to promote other matters should the Association desire same.

Mr. N. T. Hobbs, supported by Mr. H. Schultz, moved a vote of thanks to Mr. McRostie for the interest displayed on behalf of the Association in Melbourne, and the work done there had a big bearing on the increased export. Carried with acclamation.

Educational Meeting.—The Chairman reported that the very instructive and educational meetings inaugurated last year had been so poorly attended by the members that it was now necessary to decide whether or not they should be discontinued. Mr. F. G. Gill moved "That we continue with the Educational Evenings, and that each individual member use his efforts to bring other members to the meetings." Seconded Mr. C. Ragless. Carried.

Mr. N. T. Hobbs moved "That Mr. A. G. Strickland be invited to attend Executive meetings." Seconded Mr. F. Hughes. Carried.

Social Club.—The Secretary submitted a suggestion that a Social Club be formed. Mr. C. W. Giles moved "That a Committee be formed to go into the suggestion and report to the next meeting of the 'Executive.'" Seconded Mr. F. Hughes. Carried.

Resolved that the President, Secretary, and Messrs. R. Cramond, N. T. Hobbs, T. Playford and A. Elliott be the Committee.

Sectional Reports.

Tomato Section.—Mr. F. G. Gill (Chairman, Tomato Section) reported that the Section had held its annual general meeting, and nominations had been called for the Committee for next season.

Celery Section.—Mr. G. Strange (Chairman) reported that the season was going along nicely, and quantities were gradually increasing. The general meeting had been held, and new schemes for the betterment of the industry were under way.

Citrus.—Mr. N. T. Hobbs (Chairmain) stated that the Section had held a general meeting to discuss next season's prospects.

Soft Fruits. — Mr. F. Hughes (Chairman) stated that the season was practically finished. From Friday, March 25, the services of the man taking tickets around would not be required. The Section was quite pleased with the ticket system, and he thanked the Association for their support in the matter.

During the month a general meeting had been held to go into the question of cool storage as the matter was causing the Section no little concern, and the meeting carried a recommendation to the Executive that a committee be formed to co-operate with Mr. Strickland in investigating the trouble.

Mr. F. Hughes moved, supported by Mr. A. Elliott, "That a committee consisting of one representative from each of the Peach, Apple, and Pear, Citrus and Cherry Sections, together with one representative from each of the Cold Stores, and Mr. A. J. Bishop and A. G. Strickland be formed to go into the cool storage problem." Carried.

Tomato Price Ticket.—Mr. N. T. Hobbs moved "That the ticket be continued while sufficient supplies of outside Tomatoes are available, and efforts be made to get a committee of outside Tomato Growers." Sec. Mr. E. Giles. Carried.

Society Report. — The Secretary presented the report of the activities of the Fruitgrowers' and Market Gardeners' Society Ltd.

Finance.—The Secretary submitted the Financial Statement, together with accounts for payment. Mr. C. W. Giles moved "That the Financial Statement be adopted, and the accounts as presented be paid." Seconded Mr. E. Giles. Carried.

Secretary reported on activities generally during the month, and meetings attended and districts visited.

Saturday Market Opening Time.—Mr. E. Giles moved "That the Market Companies be asked to sound the whistle at 6 a.m. on Saturday mornings instead of 7 a.m. as at present." Seconded Mr. Giles. Carried.

"CONGRATULATIONS, TOM."

ELECTORS in South Australia, particularly those connected with the fruitgrowing industry, have been gratified with the return to Parliament of Mr. Thos. Playford, of Norton's Summit.

The name Playford is not a new one in politics, as Mr. T. Playford's esteemed grandfather, The Hon. Thos. Playford, was a most prominent figure in both South Australian and Federal Parliamentary circles during the years gone by. The Hon. Thos. was elected Premier of S.A. on two occasions, which speaks volumes for the regard by which he was held in that State. He was the first South Australian Senator, and also filled the high and responsible positions of Agent-General and Minister of Defence. He was affectionately known to his vast number of friends as "honest Tom."

The present Thos. Playford, M.P., is endowed with many of the outstanding qualifications that made his grandfather famous. He was first elected to the Parliament in 1933 for the district of Murray, of which the new District of Gumeracha is a part. The confidence of the electors was exemplified in the recent elections, when he was elected with an absolute majority.

Mr. Playford is a fruitgrower, growing principally Cherries, and has lived at Norton's Summit all his life (in fact, he is the fourth generation of the family to reside there) except for four years abroad on active service.

His war record was such that he gained the Commission of Lieutenant and although severely wounded, did not suffer any bodily disablement.

Mr. Playford has taken a prominent part in all matters dealing with production, transport, and marketing of primary produce, and during his Parliamentary term has undertaken, at the request of the Government, several important enquiries. He has always pressed the claims of his district in relation to the improvement of education, health, and other services.

He is a member of the Executive Committee of S.A. Fruitgrowers' and Market Gardeners' Association In-

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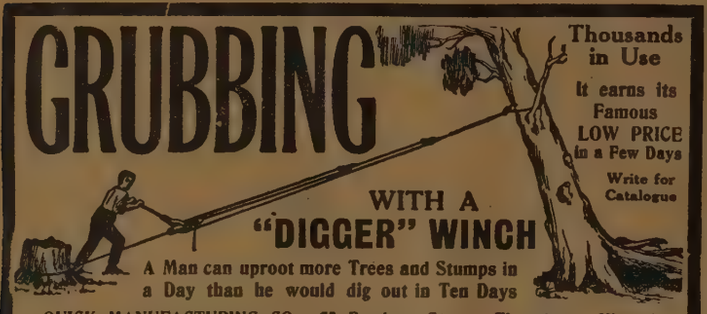

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corp., and the services rendered the Association in the problems already enumerated above has earned him the respect and admiration of the whole of the fruitgrowing industry in South Australia.

One noteworthy characteristic of Mr. Playford is that whoever the person may be, if his claim is a legitimate one, he will keep investigating the matter until the desired result is achieved.

In conclusion, the whole of the fruitgrowing industry of S.A. wishes to congratulate you, Mr. Playford, on your return to the House of Assembly, and trust that the term before you will be a happy one for you, and a successful one for your district.

GENERAL NOTES

Visit of Mr. C. W. McRostie.

MR. CLEM W. McROSTIE, the Melbourne Market Representative of the S.A. Fruitgrowers' and Market Gardeners' Association Incorp., who is well known and well esteemed by growers in South Australia, paid his annual visit to Adelaide during March.

The range of products exported to Melbourne from this State is increasing, and consequently his visit was rather a strenuous one, meeting various sections, and also interviewing numerous growers individually.

The **Celery Section**, which has commenced its 1938 season, was the first to claim his attention, and on March 14 this Section held its committee meeting, followed by the annual general meeting. Accredited agents for this season were appointed for the Eastern States, and suggestions for the betterment of the industry were received and passed on to the committee for further consideration.

March 15 saw the committee meeting of the **Tomato Section**, with the general meeting of the Section on March 17. Resumes of the past season were presented by Mr. McRostie, and the Chairman, Mr. F. G. Gill. Schemes for the coming season were discussed, and left with the Committee to finalise.

Nominations for the seven vacancies on the committee were called for and would close with the Secretary at noon on Friday, March 25. (Nine nominations were subsequently received, and ballot papers have been posted to all members. Voting will close at the Association Offices not later than noon, April 8, 1938.)

The **Cherry Section** was next in line, with a general meeting of growers in the Ashton Hall on Wednesday, March 16, when there was a fine attendance. Despite the adverse weather conditions, the season finished better than was expected, and growers expressed satisfaction of the season generally.

Monday, 21st, the Tomato growers at Salisbury were met, and a splendid meeting was the result.

Tuesday, 22nd, saw another meeting of the Celery Section, when further matters of importance for the current season were finalised.

The Marion Branch was visited on Wednesday 23rd, and although not largely attended, many matters of importance to Tomato, Grape, Cucumber growers, etc., were discussed.

On Thursday, 24th, the Torrens Valley Citrus general meeting was visited, and reports on various matters of interest to citrus growers were presented by Messrs. Muhler and Underwood.

Friday, the 25th, saw the Executive meeting of the Association, and Mr. McRostie left for Melbourne during the week-end, after a most successful if strenuous visit.

CELERY FOR HEALTH

THE CELERY SEASON of the S.A. Fruitgrowers' and Market Gardeners' Association Incorp. has now commenced, and it is interesting to note that the Celery Section of the Association has compiled numerous recipes whereby that appetising and healthful product can be consumed.

Here are a few suggestions for the housewife who is always on the lookout for some new appetising dish to serve during the Winter months.

Why not try them, because S.A. Celery is obtainable in all States of the Commonwealth.

Easily Made Celery Sauce.

Cut the celery in one inch pieces and wash well. Put into a saucepan with enough boiling water to cover it, add a little salt; boil until tender, then pour in enough milk to make required quantity of sauce, bring again to the boil, and thicken with cornflour; add a small piece of butter, a little pepper, and stir well. This is nice served with boiled meat or other vegetables.

Celery as a Vegetable.

Wash the Celery well and cut into pieces, three inches long. Put into slightly salted boiling water and cook till tender, then drain. Make a white sauce with milk, a little butter, pepper and salt to taste, and pour over the celery. Serve with sauce poured over Celery.

Try This!

Celery is very useful when making up dishes from cooked meat. Add some finely chopped Celery, either from the stalk or tender leaves, to the meat when making rissoles, and the result will please you. All soups, even pea, are improved with Celery added, and the same can be said of stews, curries and hashes.

Celery Salads.

Celery combines with almost any other vegetable or fruit, and nuts. Use the white stalks finely diced for salads; half to one cupful is enough at one time.

Celery in Soup.

Celery is excellent in stews and soups. Cream of Celery is always good. Chopped Celery improves any soup if used in the following proportions:—1 head in oxtail soup; 1 stick in pea soup; ½ head in julienne soup; 1 stick in fish soup; 1 small stick in vegetable soup made without stock.

Celery Fritters.

Take a head of Celery, one lemon, half a cup of milk, quarter pound of flour, two eggs, butter, parsley, and boiling dripping. Wash the Celery well, and cut into two inch lengths. Make a batter of the yolks of two eggs, half a cup of milk or water, and the flour. Let the batter stand for an hour or more before using. The whites of the eggs beaten to a very soft froth, and added just before using, is a great improvement to frying batter. Boil the Celery in salted water till soft. Drain well, and drop each piece of Celery into boiling dripping. Fry a golden brown, and drain on paper. Dish neatly, and serve, garnish with fried parsley and slices of Lemon.

Celery Fritters (2).

This is a method of using the green parts of Celery—young leaves and green stalks which are generally discarded as uneatable. Wash them and mince them very finely. About a breakfast cupful will be enough. Make a thick batter with one egg and 4 oz.

CELERY FOR HEALTH—(Contd.)

flour—one teaspoonful of baking powder, salt, pepper to taste, and enough milk to moisten the mixture. Add the Celery and put large tablespoonful of the batter into smoking fat. Fry a golden brown, drain, and serve hot.

Celery Fried.

Take some cold Celery which has been plain boiled and cut into 2 in. pieces. Dip in beaten egg and roll in bread crumbs. Wet fry three minutes in smoking fat; serve hot as a vegetable.

Fried Celery.

Remove the leaves from three heads of Celery and cut them into equal lengths. Place them in a pan, with two or three slices of ham, or the same quantity of bacon, half a pint of water, and a little pepper and salt. Simmer gently for fifteen minutes or a little longer, if the Celery is large. When cool, take out the Celery. Dip them first in beaten egg, and then in breadcrumbs, and fry in dripping. Tomato sauce may be served with this dish. The liquid can be thickened and served in place of Tomato sauce.

Stewed Celery.

Having trimmed the Celery, leaving only the tender leaves, wash it and put into a saucepan with boiling water to blanch, and when it has become sufficiently tender to yield to finger pressure, take out and cover with cold water. Mash up with knife put it into a saucepan with a dessertspoon butter, a little salt, 3 or 4 peppercorns and pinch nutmeg. Pour upon it about half a pint of mixed stock, and white sauce, or for want of these, water mixed with some good gravy and reduce it until it is thick. It is then to be garnished with slices of bread fried in butter.

Celery Au Gratin.

Cut a large head of Celery and boil it in half milk and half water till it is tender. Drain and put it into a buttered dish in layers. Make a white sauce with the liquor thickened with flour, and flavoured with pepper and salt. Put grated cheese and breadcrumbs on the top. Bake till it is brown.

Celery with Potatoes.

Take some cold cooked Potatoes and pass them through a coarse sieve until you have three cupfuls. Take some cooked Celery, mince it finely and mix it with the Potatoes. Add salt and pepper to taste. Add sufficient cream or milk to moisten it thoroughly. Put it in a shallow saucepan and bring to boiling point, but stir it and toss it frequently to prevent burning and ensure its getting properly heated. Arrange in a border or mound. Glaze with egg and bake in a quick oven a light brown.

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MID-MURRAY NOTES

RECORD DRIED VINE FRUIT CROP — THE FRUIT IS OF HIGH QUALITY — COLD POTASH DIP FAVORED — GROWING COVER CROPS UNDER IRRIGATION — DISCUSSION RE LEGUMES AND NON-LEGUMINOUS CROPS — EFFECT OF TEMPERATURE ON BENEFICIAL SOIL BACTERIA — DO NOT APPLY LIME IMMEDIATELY AFTER PLOUGHING UNDER GREEN CROP — ADDITION OF PHOSPHATES NECESSARY.

(By Our Correspondent.)

RENMARK, March 23.

THERE IS A SONG in the heart of the producer of dried fruit on the River Murray Irrigation Areas. This is a year of record crops of **Currants and Sultanas**, and the fruit already delivered to the packing houses shows a quality almost unequalled in the history of the industry. This applies particularly to Sultanas, and while visiting the Renmark Fruitgrowers Co-op. packing house this week I saw hundreds of tons of even quality 4 crown fruit, and a very fine line of 5 crown. There has been no rain for the past month, and the weather taken as a whole has been ideal for the production of high quality fruit.

In spite of individual loss of Currants from the January rain, and small isolated patches of Sultanas adversely affected by oidium, it is anticipated that **this year's pack of dried fruit will constitute a record.**

Every grower takes a pride in producing the highest grade of light-colored Sultana possible, and with that end in view there has been a decided swing in favor of the **cold potash dip.** The only "fly in the ointment" regarding this dip is the difficulty in eradicating the green tinge after removal from the drying racks. This process entails extra work by either spraying the fruit with a weak solution of potash and olive oil, or redipping and redrying.

Some growers using the cold dip for the first time have not obtained the best results through making the mistake of removing the fruit from the racks before it is thoroughly dry. By doing this, the fruit immediately takes on a dull leaden color, on being exposed to the rays of the sun.

If the green tinge is only slight after removal from the rack it will disappear if the fruit is bundled up during the hottest part of the day and allowed to sweat, but if the fruit is rather low in Baumé density when picked, the green coloring matter is deep seated, in which case nothing but redipping or spraying will even it up. Fruit with a green tinge will eventually even up when packed, but nobody seems to know just how long it will take, and on this point there seems to be room for some research work.

The cold potash dip is becoming more popular each year, and the point has now been raised whether the removal of the green tinge is the responsibility of the individual or whether it lies with the packing houses.

On Monday, March 21, at the monthly meeting of the Berri Branch of the Agricultural Bureau, Dr. W. E. Meier and Mr. O. Weste gave a joint address on the **Growing of Cover Crops under Irrigation.** Mr. Weste approached the subject as a practical grower, and Dr. Meier took a different angle and elaborated more on the scientific side. Mr. Weste said that although irrigation had been in progress for the past 50 years, it is only within a comparatively short space of time that the practice of growing annual cover crops has been successfully carried out. The speaker had over 30 years' experience in fruit growing under irrigation conditions, and had often tried to grow cover crops on the natural winter rainfall, but with only occasional success. However, the irrigation authorities were eventually prevailed upon to **make water available for the special purpose of growing cover crops.** Since this practice has been incorporated as a general cultural routine, crops have increased to such an extent that the production of dried fruits has materially increased.

It has been accepted as axiomatic that cover crops are the most essential aid to greater production.

Our soils are particularly deficient in organic matter, and this is not to be wondered at when we consider that an average annual rainfall of 10 inches produces little natural herbage and the soils have to be built up. **Beans** have been mostly used for this purpose, and all things being equal, the speaker thought this the most useful crop to plant, but the difficulty in getting a stand of Beans under certain circumstances was pointed out. **Peas,** however, were considered a good second, while certain species of the Vetch family have also showed themselves eminently suitable for the purpose.

This applies particularly to the **Black or Spurred Vetch,** which spreads rapidly and has been used by Mr. Arnold Heard, of the Chaffey Area, and in a few years this Vetch has increased naturally to such an extent that his land is only going to receive a top dressing of superphosphate at the next irrigation, after which the Vetch will germinate from seed shed from plants growing under the vines. Mr. Heard expects to have a good Winter cover crop without having to plant the seed. The speaker said that in cases where it is not possible to grow a satisfactory leguminous cover crop, then non-now legumes such as **Barley, Rye, Rape, Mustard,** etc., may be used.

These non-legumes will supply a quantity of organic matter, but will have to be supplemented with a dressing of artificial nitrogen either at the time of planting or in the Spring. The main consideration is to get cover crops planted, and the better crops we can grow, so will our soils be improved to such an extent as to produce bigger returns.

Dr. Meier said that as Mr. Weste had approached the matter of cover cropping as a practical grower, he intended approaching it from a different aspect. In the first place, why do we plant cover crops? Among the many benefits we can count those of adding organic matter, nitrogen, minerals, and encouraging the activity of soil organisms, and to reduce the water table. Without organic matter a soil will become dead, and it is upon organic matter that a soil depends for its tilth. Certain minerals are necessary to make up a balanced soil. In some instances it has been found that copper to the extent of one part in 50 million is sufficient for ordinary requirements, and the Waite Institute has discovered the need for applications of manganese in some of the South Australian soils, so that in some cases we may find an unexpected deficiency of an obscure mineral.

Organic matter has both a chemical and physical effect on the soil, but we must have water so that the plant foods can be conveyed through the sap veins, there to be assimilated.

Organic matter is that substance which has at some time been alive, whether it is in the form of sawdust, growing plants, or stable manure. In the main **leguminous plants** are the best for the purpose of cover crops, that is to say, plants of the **Pea and Bean** family, which have the capacity of assimilating atmospheric nitrogen, and this is done by a small micro-organism or nitrogen fixing bacteria. The value of this type of cover crop lies not only in the nitrogen fixed in this way, but has a profound effect on soil temperature, a factor which is not sufficiently appreciated in a climate of extremely high Summer temperatures.

Experiments have proved that a difference of up to 13 degrees Fahr. will eventuate by adequately shading the soil by means of a cover crop. It must be noted that the soil organisms will cease to work in a soil where a high temperature has been reached; it is therefore necessary to lower the temperature whenever possible, and cover cropping will aid in this direction.

There are many types of soil bacteria which are usually divided into two classes, aerobic and anaerobic. What we chiefly concern ourselves about are the aerobic or useful species. If they are examined under a microscope, some will be found to represent short sticks in appearance, others have roundish bodies. The Protozon prey on other useful types of bacteria. It is not until the nitrogen fixing bacteria die that they become available to plant life. The aerobic bacteria develop only when a certain amount of air is available, and the anaerobic only develop in the absence of air, as in swampy lands and water logged localities.

Aerobic bacteria live and multiply rapidly in the presence of stable manure, which makes this substance of extreme value to the horticulturist. We hear a good deal about protein when dealing with living plants. Protein substances contain nitrogen, and are found in the succulent parts of a plant, so that in ploughing in a cover crop the top growth has a decided value as a nitrogen producer, and is not confined solely to the nitrogenous nodules on the roots of the legume plant.

The highest nitrogen fixing activity of a legume is when the plant is in full flower and should not be ploughed under before this stage. On no account should a heavy dressing of lime be applied immediately after ploughing under, as this would cause a loss of nitrogen. Decomposition of organic matter will encourage the growth of bacteria and will convert the nitrogen into a type which can be assimilated by the plant.

Farmyard manure stands alone regarding organic matter, and an important point is that it contains the bacteria which have the power of breaking down the cellulose portion of organic matter.

Cellulose is that tough or woody portion of organic matter such as we see in a Bean crop which has been allowed to grow too long and has become tough and coarse.

It is impossible to get the best results from cover crops without liberal dressings of phosphates. We are sometimes told by growers that they have not had results from phosphatic application. The function of phosphates is to aid the assimilation of nitrogen, and you can be assured that without heavy dressings of phosphates the best results cannot be obtained from your cover crops. Soils in these parts are singularly deficient in phosphates, and these must be applied in liberal quantities.

At the conclusion of the addresses many questions were asked.

MID-MURRAY NOTES—(Continued)

One grower asked whether phosphates are necessary on citrus soils?

Phosphates are necessary so that nitrogen can be taken up to the plant in much the same way that potash is necessary to provide sugar in a plant.

Is Cocky Chaff of any value as organic matter?

If put in the stable and allowed to be incorporated in the stable manure or composted it would be of more value than if just spread out among the trees.

How can we grow a legume on soils where germination is seldom sufficient to warrant a continuance?

Plant a non-legume for a few years until there is sufficient organic matter in the soil to grow a legume.

Is it a good or bad practice to apply artificial nitrogen with a leguminous cover crop in March or April?

In the first place you are applying the plant food which you expect the leguminous cover crop to create for you. Nitrogen is perhaps better applied in the early Spring in its artificial form.

Will an Autumn application of nitrogen help to develop the fruit buds for the following year's crop?

By the Autumn most of the fruit buds in Sultana vines will have formed, and it is still doubtful whether such a late application will have a material effect on them.

The President of the Branch, Mr. P. Ingerson, called upon Messrs. Len Chappel and Ray Moss to move and second a vote of thanks to the speakers. In replying, both speakers paid a tribute to the intelligent interest displayed by all present, saying that it was a pleasure to be among growers who appreciated the scientific as well as the practical side of fruit production under irrigation conditions.

"NEMO."

Son: "I am sure Dad gets more absent-minded every day."

Mother: "What makes you think that?"

Son: "Well, when I met him to-day he shook hands and said, 'Pleased to meet you, my boy, and how's your father?'"

The South Australian Fruit Marketing Association, Inc.

The monthly meeting of the Executive of the S.A.F.M.A. was held at Brookman Buildings, Adelaide on March 25.

Present.—Messrs. J. S. Hammat, A. G. Strickland, M. G. Basey, G. A. W. Pope, F. F. Redden, T Playford, R. H. A. Lewis. Apologies from Messrs. P. R. B. Searcy, J. B. Randell, F. B. James.

In the absence of the President (Mr. H. J. Bishop), Mr. G. A. W. Pope occupied the chair.

Correspondence.—Letters from Australian Apple and Pear Export Council re Apple Publicity which were to be dealt with at the April meeting were deferred until the next meeting.

Telegram dated February 23 was received from Mr. Martin, of West Australia.

Letter dated March 7, from Mr. Strickland, asking for advice concerning hail insurance.

Information was supplied by Mr. Basey and the Chairman stated that the Association has no further information on the matter. The Secretary to advise Mr. Strickland.

Letter from Department of Commerce dated February 28, enclosing copies of a further report on the Egyptian Apple market recently received from the Australian Trade Commissioner in Egypt.

Letter dated March 11 from Mr. W. J. Wade re Manchester Freight Service.

Letter dated March 24 was received from the Oversea Shipping Representatives' Association re "Endorsing Mates' Receipts for Fruit." It was agreed that a copy of this letter be sent to all shippers of Apples and Pears.

Letter dated March 19, from the Royal Agricultural and Horticultural Society of S.A., asking that the Association again donate a special prize for fruit packing competitions.

Mr. Basey moved, and Mr. Lewis seconded the following resolution:—"That the Association donate the same amount as last year."

Letters received from the Australian Apple and Pear Export Council dated:—

February 28, enclosing copies of letters from the Department of Commerce re Apple Export to France and Trade with Canada.

March 3, stating that in accordance with our request, Mr. J. B. Mills would represent the Association at the deputation to the Minister of Commerce.

March 5, enclosing copy of Statutory Rule No. 18 of 1938, relating to Apple and Pear Bounty Regulations.

March 8, in regard to revision of Ottawa Agreements and suggested representation in London.

March 5, enclosing copy of letter from Department of Commerce re an ordinance issued by the Swiss Federal Council in connection with the importation into Switzerland of fresh fruit, etc., and a translated certificate which is intended to accompany the goods.

Letter dated March 23, from Messrs. Silbert, Sharp and Bishop, in regard to fruit which had been rejected on account of arsenic spray residue, and stating that they were sending two cases of Apples that were rejected and had been marked XX and X by the Inspector and that six Apples from each case had been submitted for analysis. Mr. Playford would bring report of the analysis to the meeting.

Mr. Playford reported on the analysis, which proved that the fruit contained a larger percentage of residue than is allowed.

Mr. Strickland asked to speak to the meeting before the fruit was examined. He explained what had been done in regard to the rejected fruit, and stated that the rejections had been no greater than in past years.

Mr. Redden expressed the appreciation of members to Mr. Strickland for the valuable information he had given them.

Mr. Basey then stated that it was easy to dip Apples and gave members an explanation as to how it could be done.

Mr. Redden asked that appreciation be conveyed to the Secretary for the remedying of the error in regard to fruit in city hotels, which was published in the "Advertiser."

Australasian and New Zealand Shippers

. . . wishing their fruit to be handled in the largest and most up-to-date premises in Covent Garden, should consign their APPLES, PEARS, PLUMS or ORANGES to:—

T. J. POUPART LTD.

COVENT GARDEN LONDON, W.C.2.

Our world-wide reputation for efficient salesmanship will be still further enchanced by these structural advantages which we now offer to shippers—old and new.

At Southampton also a programme of re-building and modernization has been completed, placing at the disposal of our senders the most spacious warehouses in that port.

We would remind exporters desirous of shipping to Bristol, Liverpool, Hull and Glasgow that we are established at all these centres.

Special Department for the sale of Canned and Dried Fruits and Fruit Pulp at 46 Fish Street Hill, London, E.C.3.

REPRESENTATIVES

TASMANIA: MR. ERIC E. BURGESS, 119 Macquarie Street, Hobart.	NEW ZEALAND: CO-OPERATIVE FRUITGROWERS OF OTAGO LTD., P.O. Box 163, Dunedin, C.1.
VICTORIA: MR. C. S. ANDREW, 153 William Street, Melbourne.	NEW ZEALAND: OTAGO PROVINCIAL FRUITGROWERS' COUNCIL, P.O. Box 53, Dowling St., Dunedin.

NEW SOUTH WALES:
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PATENT ATTORNEY

HEATY HOUSE, 499 LITTLE COLLINS ST. MELBOURNE.

Motor Cars, Trucks, Tractors

How Many Miles to the Gallon

Many Factors Involved.

"HOW MANY MILES do you get to the gallon?" is a question very frequently heard.

Chemists of the Shell Co. recently pointed out that normal consumption figures of fuel are dependent on many factors; for instance, the speed of test, the method of driving, the method of acceleration, the type of road surface and contour and other factors.

Generally speaking, the faster a car is driven the more fuel per mile is used. More fuel per mile is used at faster speeds due to the power required to overcome increased wind and road resistance.

Costly Idling Speeds.

The carburettor, which is the metering device for the fuel-air ratio, is elaborate in form and appears to be accurate, particularly the later model types, which have special automatic chokes, starting jets and acceleration pumps. However, if they are checked chemically and scientifically it will be found that, over a range of speed of the car, they allow the mixture strength to pass from rich to weak.

While travelling on the rich side the consumption figures will not be very excellent—this usually occurs at slow idling speeds. When the car is accelerated and held at a constant high speed and checked, it will be possible to obtain the point where the mixture strength is just correct. Any further increase in speed would cause the mixture to become weak.

Correct Fuel-Air Ratio.

That speed at which the mixture is slightly weak is correct, and gives the most economical running of the car. It may be 20 miles per hour or it may be 60—depending on the running of the carburettor and the size of the engine.

It is the aim of all carburettor manufacturers and car tuners to obtain a carburettor that will meter the correct mixture strength for all speeds. The difference in mileage per gallon will, then, not vary so much with speed as it has in the past.

However, greater speed must always cause higher consumption because of the increased loading on the engine. If accurate tests are carried out on any type of car it will be found that there is considerable variation in the consumption at 60 miles and at 20 miles per hour, although with some modern cars it is often possible to obtain a better mileage at 30 to 40 miles per hour than at 15 to 20 for the reason stated above—namely, carburettor settings.

Keep Radiator Clean

Care should be taken to prevent oil or grease from getting into the cooling system, and, as far as practicable, only good soft water should be used for filling the radiator.

Water circulation may be seriously impeded by deposits of scale, sediment and rust. The water spaces are very restricted, and are thus quickly choked by deposits, so that all reasonable care should be taken to keep them clear.

Scale deposited from the cooling water is doubly objectionable, because it not only reduces the areas of the water passages, but also it has a pronounced effect in impeding the flow of heat through the metal walls. Hence the continual use of water which contains a large amount of scale-forming matter is likely to lead to overheating troubles, unless periodical scaling and cleaning out are resorted to.

Nothing has nó marked an effect in impeding heat transmission as oil or grease. The slightest amount of greasy matter may cause trouble, especially if the water also contains scale-forming salts.

"Why do you always park by a new shiny car?"

"'Cause when it backs out it never scrapes into mine."

THE BATTERY NEEDS ATTENTION.

A FUNDAMENTAL FACT sometimes overlooked is that a battery is not a generator of electricity. It is simply a "storage" reservoir for current. When once the battery is fully charged, no amount of additional charging will increase its capacity, every cell having a definite capacity measured in ampere-hours. As opposed to this, unless the amount of energy put into the battery as it is charged exceeds the amount of energy taken out as discharged, within a period proportional to the capacity of the battery the time will come when the battery becomes exhausted or flat.

Long periods of parking with the lights on, heavy demands made by the starter motor when turning over a cold engine and the omission to switch off the ignition when the car is garaged will all help in creating this flat condition—if the car is not run very much during the day, or if no provision is made for charging from an outside source of electricity.

Depreciation in battery condition can be checked by taking hydrometer readings, these readily showing whether or not the battery is receiving sufficient charge.

With older electrical equipment, the third brush dynamo system provides for increasing the output by shifting the brush in the direction of rotation; with the modern equipment, constant voltage control is provided, and the car owner would be well advised not to interfere with the equipment. If the battery is very deflated, let it have an outside "booster" charge at an electrical service station. A loan battery can be secured for temporary use.

Never add acid to the battery electrolyte; distilled water only should be used to top up. The level of the liquid should be about half an inch above the plates; no more, because room must be left for "gassing."

FATIGUE MENACES SAFETY.

No other factor in an actual traffic accident is so potent a menace to life and limb, according to Mr. J. M. Young, President of the Automobile Club of New York, as the fact that one or both of the drivers involved was asleep at the wheel or suffering from excessive fatigue.

"Definite knowledge, as a result of nearly a million accidents last year," said Mr. Young, "shows conclusively that 12 per cent. of the accidents in which the driver apparently fell asleep resulted fatally.

"In several States highway patrolmen, noticing fatigued or drowsy drivers, will order them to pull up along the highway and rest for a while.

"If you're drowsy, tired, or suffering from eye strain," advised Mr. Young, "by all means take time off to rest. This will make for safe and sane driving, will set a good example to others, and will materially aid in reducing the toll of accidents."

"CHEVROLET" SALES RECORDS BROKEN.

Following the release of the 1938 "Chevrolet on March 9, Preston Motors Pty. Ltd. report that all previous monthly sales records were broken. In February, 1937, 181 "Chevrolets" were sold, breaking all previous records, but, during the month of March, 1938, "Chevrolet" sales reached 202 units—the highest ever recorded in the metropolitan area of Melbourne.

In addition to "Chevrolet" passenger sales, 58 "Chevrolet" trucks were sold, and 42 "Buicks"— a total of 302 units for the month of March, which is an all-time record in the history of Preston Motors.

"A kindly word,
A cheery smile,
A helpful act,
And life's worth while."

WHAT DO I KNOW ABOUT TRUCKS?

ONLY THIS. I've been driving them all my life. All sorts. All sizes. Under all conditions. And believe me if you want a truck that stands up to heavy hard-going stuff, Chevrolet's the answer. It's got guts. Tons of it. It can take all the punishment in the world—it can "take it and like it."

HERE'S AN INVITATION! Take one of these Chevrolets out on the job—on YOUR job. Put it through its paces under your usual working conditions. Find out, first hand, if it suits your needs, satisfies you. Unless you're the odd one in a thousand, you'll find it ideal. There is a big range of Chevrolet Utilities and Trucks—Chassis prices from £233 to £320 (plus Tax). Easy terms arranged.

Chevrolet TRUCKS

PRESTON MOTORS PTY. LTD.

114 Franklin St., Melbourne, C.1. F 3621.

Fruit Trees & Fruit Tree Stocks

Splendid Stock of Healthy Plants Available.

APPLES, PEACHES, PEARS, PLUMS, APRICOTS, CITRUS, ETC., PACKED AND DESPATCHED TO ALL PARTS OF THE WORLD.

Overseas Orders receive careful and prompt attention.

Catalogue printed. Code A.B.C., 5th Ed.

C. A. Nobelius & Sons Pty. Ltd.

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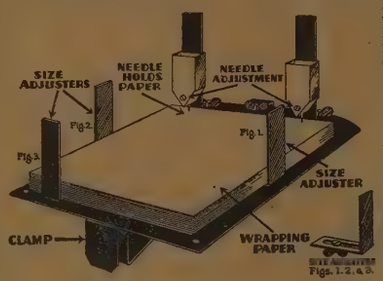
The Improved "FASTPAK" Paper Holder



Has now been improved by:—

Providing a bracket attachment which enables the machine to be clamped on either the Grader or box.

Adjusters have been extended to allow the insertion of a full ream of paper at the one operation.

Double-Needle Control ensures that there is no waste or unsightly torn corners.

Adjustable to take various sizes of paper.

Remarkable for its speed and smoothness and definitely Improves Packers' Tallies.

Manufactured by and obtainable from—

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BLACKBURN, VICTORIA

or Interstate and District Agencies.

Make certain of

A Good Cover Crop

by

Sowing with

Sulphate of Ammonia

in addition to SUPER

Ask for

1&1 or 2&1 Super & Ammonia

SULPHATE of AMMONIA is INDISPENSABLE in a WELL-KEPT ORCHARD

H1/36

Canned Fruits News and Notes

Canned Fruit Packs—

S.P.C. RECORDS EXCEEDED

. . . Abnormal Season Makes Mark

(By Our Correspondent.)

With deliveries of fruit far in excess of any previously, the Shepparton Cannery has broken all previous records for both deliveries of fruit and its processing.

During last week 25,000 cases were delivered in a single day, and 20,000 the previous day. As a result, the floor space and staff could not cope with the supply, with the result that no deliveries were taken the following day.

This is something like 6,000 cases higher than the record delivery in 1933.

Record Day Pack.

During the week a record pack of 276,000 cans was made in one normal day shift.

The average day pack is above the previous record figure of other years.

Ardmona Cannery Record.

Unexpected Figures.

The management of the Ardmona Cannery received a pleasant surprise late on Thursday night, when it was found that another record pack had been established during the day.

The record now stands at 293,000 cans for a single day session till 9 o'clock at night. The former record established the previous week was 276,000 cans.

From now until the end of the season, the cannery will be employed in processing the Pullar Cling crop.

Up to the moment 2,000 tons of Pullars have been received, and this is almost as much as the total delivery last year.

An excellent crop is reported, and deliveries indicate a very considerable increase on the pack of the last few years. It is at present estimated that the Pullar Cling delivery will reach 3,500 tons.

A Further Canning Record.

Leeton (N.S.W.) in the Picture.

It is stated that the Leeton Cannery processed 350,000 cans of fruit on March 17.

This is believed to be a record for any fruit cannery in the British Empire, and easily passed the S.P.C. record, also of March 17, of 276,000. To fill the cans 210 tons of fruit had to be cut, peeled, canned and processed.

Fruitgrowers to Meet.

In order to make final arrangements for the visit of the Secretary, Mr. W. Young, to London, as canning fruitgrowers' representative to the trade delegation, the executives of the Australian Canning Fruitgrowers' Association met in Shepparton on March 22. Representatives were present from N.S. Wales as well as northern Victoria.

Mr. W. Young and Cr. A. W. Fairley left for London recently in the "Orcades," to watch the interests of canning fruitgrowers. We wish them success in their mission.

CANNED APRICOTS PRODUCTION, 1938 SEASON.

From information furnished to the Canned Fruits Control Board by canners in the various States, it has been ascertained that the total quantity of canned Apricots processed in Australia during the 1938 season was as follows:—

	No. 2½'s. Cases.	No. 1's. Cases.	No. 10's. Cases.	Total. Cases. Actual Number.	Total. Cases. On basis of 2 doz. 30 oz. cans per case.
Export Pack:					
Choice	7,320	9,886	1,034	18,240	18,111
Standard	165,016	51,142	294	216,452	216,415
Seconds	72,803	5,851	—	78,654	78,654
Domestic Pack:					
Standard	61,171	5,731	—	66,902	66,902
Totals	306,310	72,610	1,328	380,248	380,082

For the purpose of comparison hereunder are shown production figures of canned Apricots during each of the preceding nine years:—

Equivalent of Cases each Containing 2 doz. 30 oz. Cans.

1929, 237,480; 1930, 277,274; 1931, 91,538; 1932, 182,071; 1933, 223,619; 1934, 229,316; 1935, 274,360; 1936, 379,435; 1937, 127,189.

CANNED APRICOTS HIGHEST — A RECORD.

Information supplied to the Canned Fruits Control Board by canners in the various States shows that the total quantity of canned Apricots processed in Australia in the season of 1938 was 380,082 cases, on the basis of two dozen 30 oz. cans a case.

This compares with 127,189 cases in the preceding year, when damage was caused by hail and rain, and 379,435 cases for 1936, the previous peak year.

Canned Fruit Exports.

Exports of canned fruits to various destinations from the beginning of the season (January 1) to February 28 are as follows:—

Country.	Apricots Cases.	Peaches Cases.	Pears Cases.
U.K.	17,618	7,101	29,528
N.Z.	1,276	1,420	814
Canada	—	—	—
East	522	1,165	1,031
Misc.	73	99	228
Total	19,489	9,785	31,601

Heavy shipments were made in March.

Heavy shipments will continue in April.

CANNED MANDARINS.

Threatened Imports from Japan.

How Japanese firms had made great strides in the process of canning Mandarins, and kept running costs low by canning other commodities, such as fish, when they were off the market—thus enabling them to sell at lower cost—has recently been disclosed. Citrus growers are feeling alarmed at this menace to the industry. It was reported by the Murray Citrus Growers' Co-operative Association that a firm was endeavouring to obtain a footing in Australia, and wholesale merchants stated that the firm was canvassing for a Melbourne agent.

VICTORIA

Goulburn Valley News and Notes

A Bountiful Season—Peach Crop Heavy —100,000 Cases of Pears for Export.

CANNING RECORDS BROKEN

ALTHOUGH there were heavy losses with Williams Pears owing to heavy wind storms and extremely dry weather causing the fruit to drop from the trees, fruitgrowers generally report a satisfactory season.

For the first time for many years there was talk of a shortage of Pears for the Shepparton Cannery, caused by the windstorms and shedding of fruit, but towards the end of the season it was found that the supply and demand actually balanced.

The Shepparton Cannery decided to increase its pack from 3,000 tons to 3,500 tons, and in addition arrange for the Kyabram Cannery to buy 500 tons from the Shepparton district.

The Ardmona Cannery also put up a large pack of Williams Pears, approximately 3,500 tons, and in addition also arranged with the Kyabram Cannery to take 500 tons.

Thousands of tons of Pears were also supplied by Goulburn Valley fruitgrowers to metropolitan canning factories, which fully demonstrate the rapid growth of the industry in recent years.

Export Pears.

Growers of export Pears have again had a successful season. Large quantities of Pears of excellent quality have been gathered.

It is estimated that at least 100,000 cases of Pears will be sent from this district, for the London market.

Up to the present time at S. J. Perry's packing shed the fruit handled is easily a record.

Of the two main varieties, they have packed 36,000 cases of Packham's Triumph, and 21,000 of Josephines. It is expected that another 25,000 cases of these varieties are still to be packed. Then there are Winter Nelis and other varieties grown in the district, so that the total quantity of Pears to be exported is likely to be in the vicinity of 100,000 cases.

Over 80,000 cases of Apples and Pears have already been packed up to the present time.

Apples.

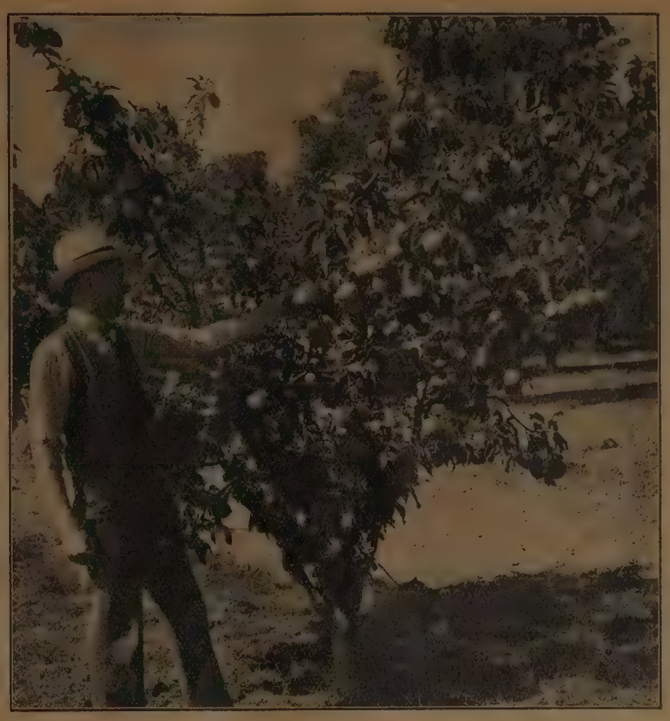
There has been a fairly good crop of Apples in the Shepparton district, the varieties most in favor being Granny Smith, Jonathan, and Dunns. There are practically no Apples of the export varieties grown in the Ardmona district. The area under Apples is not very large there. Growers have to specialise in the green skinned varieties, Granny Smith being the chief favorite, owing to its good keeping qualities, and the excellent flavor, with its fine waxy skin. This variety does particularly well in the warm climate under irrigation, while the red varieties, such as Jonathan, do not compare favorably with Apples grown in the cool southern districts.

Pullars Cling Peaches.

There has been a heavy crop of Pullar Cling Peaches right throughout the Goulburn Valley, and growers have had the busiest three weeks harvesting the crop that they have experienced for many years. Hundreds of men have been employed picking the Peaches, while large fleets of motor trucks have been continually delivering Pullars Cling Peaches to the local canneries, until every cool store and every available floor space were filled with Peaches.

This great canning industry of the Goulburn Valley was put on its mettle and presented scenes of great activity—working seven days a week, with overtime every night, the employees, especially the women workers were able to earn high wages, which are paid weekly, running up to thousands of pounds.

A word of praise to the management of these canneries would not be out of place. The organisation is wonderful. The work goes on from day to day; smoothly and satisfactorily, almost without a hitch, that one marvels at the gigantic tasks these men have to perform in canning millions of cans of fruit daily.



Young Granny Smith Apple tree in the orchard of Mr. G. W. Peart (C. J. Goodman), Bairnsdale, Vic.

CATALOGUES RECEIVED

C. J. Goodman, Picnic Point Nurseries, Bairnsdale, Vic.—Nicely illustrated catalogue of fruit trees, small fruits, ornamentals, vines, etc. Fruit listed include Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Quinces, Citrus Fruits, etc. A reliable spraying chart is included in this catalogue, also blocks showing how to plant and cut back.

H. N. Wicks, Balhannah, Sth. Aust.—General nursery catalogue and price-list of fruit trees, miscellaneous fruits, vines, ornamental trees, etc. Items noted in this catalogue include Almonds, Apples, Apricots, Cherries, Plums, Peaches, Walnuts, etc. Some excellent views of Mr. Wicks' Balhannah Nurseries are included.

L. P. Rosen & Son, Carlingford, N.S.W. — Catalogue of fruit trees, Rose plants, ornamental trees, etc. Items noted include Apples, Cherries, Pears, Persimmons, Figs, Nuts. Guaves, Pineapples, Pomegranates, Grape vines, berries, citrus, etc. Also listed are secateurs or pruning shears, budding, grafting and pruning knives.

C. A. Nobelius & Sons Pty. Ltd., Gembrook Nurseries, Emerald, Vic.—Catalogue of fruit trees, Elms, Planes, Oaks, Poplars and other deciduous, ornamental trees, shrubs and conifers. Among the illustrations was noted a superb specimen of the Weeping Cherry.

VICTORIAN FRUIT SHOWS

DIAMOND CREEK SHOW.

At the Fifty-Fourth Annual Show of the Diamond Creek Horticultural Society, opened on March 14 by Mr. W. H. Everard, M.L.A., excellent fruit was displayed. There was keen competition for the championship class for six varieties Apples and three of Pears, Messrs. Wadeson Bros. winning 1st and 2nd prizes, with J. Cowin a close third. Among the varieties noted were Jonathans, Stewarts, Dunns, Granny Smith, London Pippin, etc. E. C. Herbert won the first prize for two cases packed for Victoria Market; L. A. Wadeson, packed Pears. Apples packed for export by children, boys, B. Heddle; girls, Jean Cracknell. Other prize-winners in the fruit section included A. J. Jones & Son, W. J. Miller, H. G. Upton, W. A. Mills, L. Bartlett, G. J. Middleton, P. Lawrey, G. Brock. The flowers and vegetables were of a high standard. The arena events attracted a large attendance.

MILDURA.

There was a large attendance at the recent annual "get-together" meeting of clients and company officials of the Aurora Packing Co. Pty. Ltd., at Mildura. Mr. J. W. Brown, managing director, gave a comprehensive address, outlining hopeful prospects for 1938, and improvements made in the previous year. He touched upon the subject of the new plant, hand-picking tables, the co-operation given by growers in using wooden hessian pegs instead of pins, the officer to be appointed to arbitrate on any matters regarding condition or grade of fruit, the advancement of the London business, and competition and prices overseas. The company would issue progress payments at the rate of £8 per ton on all grades of Sultanas, Lexias and Currants.

Although the prospect for Lexias was satisfactory, partly on account of the war in Spain, Mr. Brown stated, Australian growers should not increase plantings.

SHEPPARTON GRAND NATIONAL SHOW.

The Shepparton Centenary Show, to be held on October 26 and 27, has been raised to National status, as this will be the Grand National Show of Victoria this year.

So great is the competition for this privilege that the Department of Agriculture has decreed at least ten years must elapse before a Society can hold another Grand National Show. The distinction is only conferred to Societies which offer at least £500 prize money.

In addition to the Government Champion certificates which are awarded in various sections, the Department of Agriculture stages an exhibit which includes heads of cereals, varieties of grasses and tobaccos, samples of wool and fibres, and subjects such as stock food, honey, poultry dressing and fruit preserving are dealt with.

It is hoped that the Governor-General, Lord Gowrie, will open the Show.

SOMERVILLE SHOW.

The Annual Somerville Show drew a large number of entries of choice fruit from the Peninsula orchards. To encourage better class packing, sections were open to pupils of the Department of Agriculture, individual and class prizes being offered. Tyabb State School (No. 3129) won the J.

Gerrard Sales and Service
Good Australian packing supplies backed by dependable GERRARD SERVICE
Wire Tying Machines — Wire-Seal Strapping — Flat Band Strapping
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GERRARD WIRE TYING MACHINES CO. PTY. LTD
Melbourne, Sydney, Brisbane, Townsville, Perth, Adelaide, Hobart

V. Fairbairn Cup and the Gerrard Shield, the Red Hill South S.S. winning second prize for one case packed Apples. K. Monk and D. Dennett were the winners of the section for two cases of Pears to be packed under the supervision of a Departmental instructor. S. K. Dennett and K. Dennett were the winners of the section for two cases of Pears packed by school children and pupils attending the Department's classes under the age of sixteen years.

W. F. Boe obtained the highest aggregate in the fruit section and won the Keast Cup with a tray of Josephine Pears. G. G. Cole & Son had the champion tray of Apples and Mrs. H. Westaway secured the honours for the best export case of Apples.

Varieties exhibited included: — Apples: Alfriston, Delicious, Duke of Clarence, Emperor Alexander, Five Crown, Gravenstein, Granny Smith, Jonathan, Reinette, Rome Beauty, Statesman, Stewart's Stone Pippin. Pears: Beurre Bosc, B. Clairgeau, Broom Park, Howell, Josephine, Kieffer, Packham, Vicars, Williams, Winter Cole, Winter Nelis and miscellaneous fruits such as Quinces, Figs, Plums, Lemons, etc.

Among the prize-winners were:— W. F. Boe, J. D. Grant, G. G. Cole & Son, J. Brunning & Son, C. C. Barber, A. E. Dennett, L. J. Heywood, A. E. Thornell, G. E. Shepherd, J. and B. Caldwell, F. L. Twyford, T. W. White, W. Young, E. J. Murray, J. Robert, R. J. Mair, Sir Geo. Tallis, J. Heywood, A. J. Benton, H. S. Hilton, G. de Bernardi, R. J. Thornell, S. Lord, Mrs. J. W. Green, W. Armstrong & Sons, E. M. Allison, A. White and S. L. Scott.

J. Brunning & Sons were the winners for the discovery of new variety of Apple hitherto unclassified by Federal Pomological Committee.

In addition there were sections for cases and trays of Apples and Pears, both cooking and dessert.

Other attractions were flowers, vegetables, farm produce, domestic art work and cookery. The stock section and ring events created much favorable comment.

Vacuum Oil Company's New Managing Director

Mr. C. K. Gamble

Mr. C. K. Gamble who was recently appointed managing director of Vacuum Oil Company Pty. Ltd., arrived in Australia on March 21 to take up his new position. He is accompanied by Mrs. Gamble. Mr. Gamble is no stranger to Australia. Between 1927 and 1934 he was resident in Melbourne, where he occupied important executive positions with Vacuum Oil Company. During these years, Mr. Gamble travelled extensively in every State of the Commonwealth, acquiring a considerable affection for Australia and Australians, which makes him very happy to be stationed here once more.

Mr. Gamble was born in California, where his father, a Fellow of Queen's College, Belfast, has immigrated from England to found the first public schools modelled on the famous public schools of England. His father was later acknowledged one of the outstanding classical scholars of the United States. With this scholastic atmosphere surrounding his youth, Mr. Gamble studied at the University of California, and completed a brilliant course with an Honours Degree in Arts.

After graduation he entered upon a business career which has since extended from the United States of America to Europe, Asia and Australia. In these four continents, Mr. Gamble has won an enviable reputation, not only as a marketer of petroleum products but also as a fine citizen. In 1917, Mr. Gamble resigned the post he then occupied in Greece, to enlist with the first American contingent to arrive in France, and was on active service for 18 months with the Field Artillery.

Mr. C. K. Gamble, New Managing Director, Vacuum Oil Co. Pty. Ltd.

RECORD DRIED FRUIT SALES.

Effective Publicity Methods.

The Chairman of the Dried Fruits Joint Publicity Committee (Mr. P. J. Moloney), who is also Chairman of the Victorian Dried Fruits Board, states there was a remarkable increase in the sale of dried fruits in Australia in 1937. Of the Australian 1937 pack, 19,086 tons had already been sold in the Commonwealth, and, with a small quantity of last season's fruit still to be disposed of, the Australian consumption would probably reach 20,000 tons. **This was at least 3,000 tons more than has ever been sold in Australia before,** the previous record being 16,974 tons in 1936. The sale of vine fruits, i.e., Currants, Sultanas and Lexias, had shown a progressive increase, whilst **dried Prunes** were obviously becoming more and more a part of the daily menu in Australian homes, over 2,000 tons of this variety having been sold last year.

The publicity methods include much in the way of educational propaganda, demonstrations and addresses to school children.

Dried Fruits Notes

SOUTH AUSTRALIAN DRIED FRUITS BOARD.

THE S. Aust. Dried Fruit Board met on February 28, 1938, when all members and Secretary were present.

Further consideration was given to the resolutions of the conference of Prune interests, held in Adelaide on January 28, 1938, and it was agreed **to request Prune dealers and packers to co-operate with the Board in urging their growers not to deliver Prunes of 120 to the lb. and over.** In respect to the conference resolution asking the Board to extend control to cover dried dark Plums, it was decided to obtain a report from the Board's Investigation Officer as to the extent to which this variety was marketed.

Reports of the Investigation Officer were submitted on further consignments of **Sultanas** from N.S.W. and a consignment of Lexias from W.A., and delivered to a S. Aust. dealer. The report disclosed that the packing was irregular and the fruit did not comply with the prescribed grade standards. The Secretary reported he had taken the matter up with the Boards concerned.

The levy for the year 1938 was determined at the rate of 5/- per ton, this being the rate fixed by the Boards of N.S.W. and Victoria.

Secretary reported he had arranged a conference between Board representatives and inspectors to be held at Barmera on March 2, 1938, and it was agreed that the Board should be represented by Messrs. Murdoch, Till, and the Secretary.

Applications for new dealers' registrations and cancellation of registrations were dealt with, as well as applications for transfers and renewals of packing house registrations.

AUSTRALIAN DRIED FRUITS.

Sales of Australian dried fruits in Great Britain for the week ending March 10 covered 157 tons of Sultanas at an average of £37/16/11, and 105 tons of Currants at an average of £24/16/4 per ton. The clearance of the 1937 season's Currants is completed. Of the shipments approximating 20,000 tons of Sultanas to Great Britain, 800 tons only remain unsold or afloat. The total shipments of the 1937 harvest to all markets were approximately 54,000 tons, of which remain unsold the 800 tons of Sultanas referred to above. Shipment of new season's fruit to Great Britain has commenced.

DRIED PEACHES AND NECTARINES.

Increase in Nectarine Prices.

NEW SEASON'S prices for dried Peaches and Nectarines have been announced by the Australian Dried Fruits Association. Prices for Peaches are the same as last year.

The Nectarine crop was fairly light this season, and choice grades of Nectarines are 1d. per lb. dearer. Standard grades are ½d. per lb. dearer.

The prices, which are for the principal capital cities and producing areas, are as follow:—

Nectarines (28 lb. Boxes).

	"Fancy." One Box Per lb.	"Choice." One Box Per lb.	"Standard." One Box Per lb.	One Box Per lb.
5-crown	1/2	1/1	1/–	—
4-crown	1/1	11¾d.	10¾d.	—
3-crown	11¾d.	11d.	10d.	—
2-crown	11d.	10d.	9d.	—
1-crown	—	8¾d.	7d.	—
Slabs	—	—	—	7d.
"Plain"	—	—	—	7d.

Peaches (28 lb. Boxes).

	"Fancy." One Box Per lb.	"Choice." One Box Per lb.	"Standard." One Box Per lb.	One Box Per lb.
4-crown	1/–	11d.	10¾d.	—
3-crown	11d.	10¾d.	10d.	—
2-crown	10d.	9¾d.	9d.	—
1-crown	—	8d.	7¼d.	—
Slabs	—	—	—	7¼d.
"Plain"	—	—	—	7¼d.

DRIED FRUITS.

New Record Forecast for Commonwealth Production of Dried Vine Fruits.

Details of Quotas of Vine and Tree Fruits for Australian Consumption.

THE Secretary of the S. Aust. Dried Fruits Board (Mr. W. N. Twiss) recently advised that the State Boards have agreed that the opening quotas for the proportion of dried fruits produced in the year 1938 which may be lawfully marketed within each State, are as follows:—

Currants, 15 per cent.; Sultanas, 12½ per cent.; Lexias, 40 per cent.; Prunes, 50 per cent.; Peaches, 55 per cent.; Apricots, 40 per cent.; Nectarines, 60 per cent.; Pears, 25 per cent.

The quotas were recommended by a Committee of the State Boards which recently met in Melbourne, when the estimate for the 1938 harvest was considered in relation to the actual exports overseas and sales within the Commonwealth, of 1937 season's dried fruit.

According to present indications, it is expected that the total production of Currants, Sultanas and Lexias will be a record for the Commonwealth.

Sultanas and Apricots are yielding a substantially heavier crop than the seasons 1936 and 1937. Growers in the Murray Valley, however, will require favorable climatic conditions with a good drying season to produce the quantity that is expected.

It is also pointed out that the quotas now declared refer only to the particular State in which the determination is made, and are subject to revision as the season advances.

Phone: Epping 96. After hours: Epping 58. ESTABLISHED 1901.

FRUIT TREES

Large quantities in all leading varieties. Our trees this season are exceptionally sturdy and well shaped, without any blemish or marking. Early booking is advisable for later delivery. Large quantities of Peach stocks and Lemon stocks.

CATALOGUE FREE on Application.

KUNDE SECATEURS, BUDDING AND GRAFTING KNIVES AVAILABLE.

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Export & Commercial News

New Zealand News & Notes

DIFFICULT EXPORT SEASON — ARE MANURING AND CULTIVATION RESPONSIBLE FOR ADVANCED CONDITION OF C.O.P. APPLES — THE QUOTA SYSTEM DISCUSSED — IS CONTINUANCE WORTHWHILE — IMPORTATION OF CITRUS NOW IN HANDS OF GOVERNMENT.

(By Our Correspondent.)

THE EXPORT SEASON to date must have caused many headaches to those responsible for arranging packing supplies, and the shipping of the fruit. A record crop in New Zealand has coincided with a lack of shipping space, and that combination alone is at any time difficult to handle. The situation this year has been aggravated by advanced maturity in some of the varieties; broken weather during picking, shortage of labor in the orchards and packing sheds, and very slow work on the waterfront, causing numerous small delays to ships, which in the aggregate amount to quite a number of days while the boat is on the coast.

The very unsettled state of Europe in the middle of March gave cause for further anxiety, for it is quite obvious that if international trouble should culminate in war, space for export fruit would be commandeered for more essential produce. Gradually the problems are being overcome, that is where human effort is of any value. This excludes weather conditions or the maturity of the fruit, and more or less waterside labor, as it seems that the watersiders are a law unto themselves.

The space problem is complicated by the operation of the quota. It has been quite obvious for some time that New Zealand could far and away exceed the quota agreed upon for the United Kingdom markets. A further complication has crept in because of the Government refusing the guarantee on fruit passed for export, but for which space cannot be secured. It also seems obvious that the estimate of the crop made in January was very much below the actual figures, and it is still a question of whether growers who booked conservatively are going to secure sufficient space at the end of the season to clear their export quantities.

The advanced state of maturity of some of the fruit resulted in quite a large quantity of **Cox Orange Pippin** being refused by the ships, after being accepted for export, and this fruit has been thrown on the local market to the further detriment of prices, which are already at a non-payable level. Various theories are being put forward to account for this advanced maturity. Weather has had a lot to do with it, but it has been noticed that fruit from certain orchards has matured more rapidly than that from adjoining properties, and it seems natural to seek the solution of the problem back in the orchard itself. Possibly heavy nitrogenous manuring or unbalanced manuring, poor cultivation or wrong cultivation, are the initial causes.

The size of the fruit is another factor. Some growers, who have adopted a manurial programme with a heavy percentage of nitrogen, have experienced a lot of trouble because of their fruit being too large and too green for export. It is this type of fruit that is showing signs of overmaturity after a few days in the boxes.

The high wages being paid in various industries have attracted the best workers elsewhere. Fruitgrowers have been unable to get satisfactory labor for the packing sheds, and in many cases the labor secured has been the reverse of good.

The New Zealand waterfront has earned the reputation of being the slowest in the world. The tonnage handled per hour is particularly low, this may be accounted for by the operation of stand-by time, which means that two spots of rain and the watersiders knock off irrespective of the cargo being handled, the nett result being a gradual increase in cost which ultimately must be paid by producers.

With all these factors operating is it any wonder that the export season is a nightmare to those holding responsible positions. Those concerned will heave a sigh of relief when the bulk of the export fruit is cleared, and the worry is passed on to somebody else at the market end, and there will be a few worries this year.

It is very evident from the prices coming through that American supplies to the United Kingdom markets are particularly heavy. Good stuff is bringing 6/- to 8/- a box, so the prospects for early mid-season fruit from Australia and New Zealand are far from bright. Once again we are faced with the question—is an Australian New Zealand quota worth while. The United Kingdom and the U.S.A. are at the present time negotiating a tariff agreement, so that does not look like any further restriction on U.S.A. fruit shipments to England.

In the absence of any restriction the Southern Hemisphere may as well realise that the law of "The Survival of the Fittest" must sooner or later apply. In some ways it is a pity that the evil day has been postponed so long. If the industry had been allowed to find its own level some few years ago, those left in it today would be on a very sound basis. Export markets have been contracting instead of expanding, and on the law of supply and demand, production must follow suit, and this can only be avoided by permanent and continual assistance from the public funds. Fruitgrowers will remain on the bread line until the demand is slightly ahead of supplies.

Tariffs:

Our anticipations in last month's notes have been confirmed by the publication of the tariff alterations agreed upon between Australia and New Zealand. A number of the local industries in New Zealand have secured additional protection against Australian manufactures. The automatic result will be an increase in the retail prices throughout New Zealand.

Citrus and Bananas:

Mr. J. E. Thomas, of the Internal Marketing Department, has been in Australia recently, conducting negotiations regarding the importation of Australian citrus during the next season. **In future the Government will do all the buying and will distribute among the wholesale trade.**

We now learn that there will be no Australian fruit admitted before June 1, and New Zealand will rely on the Cook Islands and California until then. The wholesale price to-day of the best Californian citrus is 47/6 per case, and the Cook Islands are reported to have insufficient fruit for N.Z. requirements, so why the Government are restricting Australian shipments until June is not quite understood.

It is obvious, however, that the organisation required to handle the whole of the Orange and Banana imports is not yet complete, and private enterprise is being given freedom until June 1. The organisation required cannot be built up in a day, the firms at present in the business have taken years and the men running them have had the practical experience over that period. **We are still of the opinion that the Government would have been well advised to leave the business in the hands of private enterprise, however, we may be wrong —time alone will tell.**

"BETTER FRUIT."

"Better Fruit" is the title of a helpful booklet issued by the Vacuum Oil Co. Pty. Ltd. This booklet is profusely illustrated and contains a wealth of information on the control of orchard pests.

Items dealt with include Gargoyle Spraying Oils, Action of Gargoyle Spraying Oil on the Bark of Fruit Trees, Types of Insects, Respiration of Insects, Life History and Habits of Orchard Pests, Scale Insects, Red Spider and Bryobia Mite, Aphides, Fungi, Fungicides, Citrus Pests, Orchard Hygiene, etc. A spraying chart is included, the information being listed under the following headings: Tree, Pest or Disease, What to Use, Time of Application, Comments.

Fruitgrowers may obtain this helpful booklet free on application to the Vacuum Oil Co. Pty. Ltd.

Make Your Export Produce a Safe Investment by Shipping to and through

SOUTHAMPTON

PEARS and APPLES

A few days saved mean the difference between profit and loss . . . . . .

There are many reasons why you should ship your perishable produce—particularly PEARS—through Southampton, England's most modern port. Here are some of them:—

Substantial local markets with a fruit sales room actually on Southampton Docks Estate. Quicker and frequently cheaper transit to Southern and Midland Towns. The Southern Railway of England runs express freights from Southampton to all these centres, saving days and money.

London is reached by express freight trains in three hours from Southampton—All fruit unloaded in Southampton to-day will be at Covent Garden, Spitalfields, or Borough Market for early morning market to-morrow, with days saved as against fruit discharged by ships calling at Continental and other outports first. The slight additional cost is altogether outweighed by the tremendous advantages of days saved.

Deterioration is avoided by special arrangements for sorting to mark, and quick insulated trains direct to London.

Southampton cold stores available for storage of produce for local consumption or Midland deliveries. Pears can be discharged from ship to cold store in less than 5 minutes.

Before the next exporting season, consider these advantages, and ask for Southampton Discharge for London Markets.

THE QUICKEST WAY TO BRITAIN'S MARKETS

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CROWN PACK FOR APPLES.

Departmental Officers from Other States Visit Tasmania.

FOLLOWING REQUESTS received from the West Australian and South Australian Departments of Agriculture, facilities were made available to Horticultural Officers from these States to visit Tasmania this season to study the crown method of packing Apples and Pears in Standard boxes.

Messrs. H. Flintoff, Western Australia, and E. Leishmann, South Australia, were in Tasmania during February and March, and after receiving instructions from the Departmental Officers visited a number of packing sheds in the different districts where this system has been adopted.

The Minister for Agriculture (Mr. Cosgrove) stated as follows:

"It is pleasing to see the interest that is evidenced in other States of the Commonwealth in this method of packing Apples and Pears following the commendatory reports that were made on consignment of Tasmanian "crown packed" fruit shipped overseas last season."

During last year Horticultural Officers from Queensland and N.S.W. also visited Tasmania for the purpose of studying the pack, and advice has been received that it is giving satisfaction, particularly in respect to the delivery of full weights of fruit in the boxes, with a minimum of bruising.

APPLE ADVERTISING IN U.S.A.

£15,000 to be Spent on Three Months' Campaign for Delicious and Winesaps.

Health Properties are Emphasised.

The Washington State Apple Advertising Commission has advised that it is prepared to spend $75,000 on the advertising of Delicious and Winesaps, the campaign to commence on January 10, 1938, and carry through to April 10.

A new feature of the campaign will be the bold use of the health properties of the fruit, the Commission taking advantage of the publicity given the therapeutic value of Apples by a national medical journal. This will be the first occasion in the history of the Apple industry that the therapeutic properties of Apples will be used as advertising copy.

Dr. Ira Manville, of the Oregon Medical School, and H. H. Mothern, of Pullman, Wash., who is associated with the Federal Department of Agriculture in food research, and is co-operating with Dr. Manville in therapeutic research, attended the meeting and furnished the Commission with information for use in advertising the health value of Apples.

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Consignments solicited. One Trial Invited. Best Prices obtained. Prompt Advice and Payment.
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Having carried on a successful business for over half a century, our name stands high in the Wholesale Fruit Trade of Australia. Our spacious premises at Melbourne Wholesale Fruit Market are admirably adapted for the conduct of our large business, and growers are assured that our best efforts are always at their disposal.
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REGULAR SUPPLIES OF GOOD FRUIT, WELL PACKED AND GRADED, BRING THE BEST RESULTS.

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Growers in all States are invited to send consignments. Highest market rates and prompt settlements.
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Established 1892.
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Growers Will Receive Top Market Value and Prompt Returns.
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Producers' Co-operative Distributing Society Ltd.
Are now paying a Bonus of 10% on all Commissions charged to regular clients of the Fruit & Vegetable Section for year ending Sept., 1935
Send Your Consignments
TO US
MELBOURNE & SYDNEY.

Apple & Pear Industry

Deputation to Prime Minister and Minister for Commerce

A STRONG CASE for needed relief for the Apple and Pear industry was put before the Government at Canberra on March 4. There were present (from the Government), the Prime Minister (Mr. Lyons), the Minister for Commerce (Sir Earle Page), the Assistant Minister for Commerce (Mr. Cameron), Messrs. McCarthy (Acting Secretary, Department of Commerce), Stevenson (Sec., Agricultural Council), W. M. Carne (Fruit Research Officer).

From the Apple and Pear Council, Messrs. J. B. Mills, President, G. W. Brown and R. E. Boardman (Secretary). Mr. Mills requested reconsideration of the Apple and Pear Bounty for 1937. He stated it was felt by the industry that the Bounty had been decided on the assumption of a greater quantity of F.O.B. fruit than was actually the case. When the matter of the freight agreement with the O.S.R.A. was being discussed, Mr. Thorby (then Assistant Minister for Commerce) had stated in view of the freight reduction not being available until 1938 it would be the responsibility of the Government to look after the industry on its 1937 shipments, and all present at that conference were definitely of the opinion that assistance would be granted at least to the extent of the 1936 Bounty. It was therefore a matter for concern when the Government eventually reduced the grant to 2½d.

The Prime Minister stated that the Government had been aware of the exact position. The proportion of F.O.B. to consignment fruit was not the deciding factor in fixing the Bounty. All relevant facts had been considered. A total amount for bounty had been under discussion by Cabinet, and it had been finally decided to add sufficient to make the sum for distribution 2½d. per case. It would be misleading to say the Cabinet would reconsider this matter with a view to varying it.

Mr. Mills requested early announcement of Bounty for the coming season's export. The industry trusted that the Government at the forthcoming London Conference, would attain the objectives in relation to fruit as disclosed at the meeting of the Agricultural Council. American competition with Apples was severe. All the shipping space available had been booked by American fruit shippers up to the end of March, which meant that our growers would have to face this competition in the United Kingdom up to the end of May. The Apples were being shipped on a 50 cent. guarantee advance. In U.S.A. the bulk of their Apple production was for local consumption; over 80 per cent. of the fruit was consumed locally, leaving less than 20 per cent. for export. It was this surplus which competed with Australian fruit. The increased costs of cases and wrapping paper had much more than offset the freight reduction. F.O.B. prices were 20 per cent. lower than last season. In N.Z. growers received a guarantee representing 6/6 abroad; Australian prices were around 5/- for main varieties. Growers had gone to the expense of improving their pack. In view of the extraordinary position of the industry he considered that 1/- per case bounty was needed, this sum to go to producers only.

Sir Earle Page said that as there appeared to be a million less cases of Apples in Australia this year as compared with last year, would not a publicity campaign relieve the situation?

Mr. Mills replied that he did not know where the Government got their figures—as far as he (Mr. Mills) knew Western Australia was the only State with an appreciable reduction on last year's products, and in any case, Western Australia were not competitive in the Eastern markets. Sir Earle Page replied that Tasmanian figures disclosed a reduction of 600,000 on last year's total.

Mr. Mills said that an Apple publicity campaign was urgently needed. Growers had requested the Government to give them power to tax themselves to find the needed money, but needed facilities by way of excise or sales tax had not been made available to the industry.

The Prime Minister: Have you thoroughly sounded the position regarding the raising of money for publicity by voluntary methods.

Mr. Mills: We have carefully considered the voluntary method, but can see no means of effective collection of the needed funds. The industry itself has requested a system of compulsory levy.

A discussion then ensued between Ministers and Department officers. Mr. Cameron suggested the orchard tax system for collection of funds for advertising, but Mr. Stevenson pointed out this was now operating in N.S.W. and Tasmania, and further levies would be difficult to collect. The cost of collecting by means of sales tax was considered to be high, and policing would be difficult. Sir Earle Page stated the citrus industry had also sought a levy on production; the Government was anxious to arrange this, but it was found to be impracticable.

Mr. Brown supported the statements made by Mr. Mills. With regard to advertising, the work done last season was certainly very valuable, and should be followed up. A three-year publicity campaign was needed in order to make it effective.

Mr. Mills, in conclusion, suggested in view of the urgency of the matter, and that the publicity campaign should be running now, that the Government make an immediate advance.

The Prime Minister stated that the States would be approached as to any joint arrangement which could be made. The matters brought forward would receive careful consideration.

A statement was subsequently issued from the Prime Minister to the effect that no announcement re Bounty would be made until the new season's prices were ascertained. A grant of £2,000 would be made available for publicity purposes and this subject would be further discussed at the next meeting of the Agricultural Council.

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The Victorian Fruit Marketing Association

The monthly meeting of the Executive of the V.F.M.A. was held at the C.T.A., Melbourne, on Tuesday, March 15, 1938, at 10 a.m.

There were present—Messrs. G. W. Brown (President), W. H. Carne (Vice-President), J. B. Mills, W. P. Hutchinson, G. Douglas, K. V. Eagle, H. M. McLean, J. J. Tully, F. Moore, F. R. Mellor, H. J. Noonan, K. Weeding, R. A. W. Bailey, S. Brown, F. Cave, J. M. Ward (Superintendent of Horticulture), E. N. Robinson (Commonwealth Co-ordinating Officer), and R. E. Boardman (Secretary).

Apologies were received from Messrs. A. S. Harrison, G. H. Sprague, E. Russell and E. I. Lawford.

Tasmanian Fruit in Victorian Space.

Mr. Carne reported having received a letter from a grower, complaining of the non-loading of his fruit because of the space being occupied by Northern Tasmanian fruit sent to Melbourne for loading. Mr. Carne, continuing, said this was a repetition of last season, when Victorian Yates could not be shipped in ships duly arranged for because of similar procedure.

The chairman stated that he understood the quantity of N. Tasmanian fruit to be shipped from Melbourne, in excess of the Tasmanian quota, was around 40,000 cases. This was serious for Victorian growers. Apparently the Commonwealth authorities were unable to stop the practise as the fruit had been duly passed for export, and was in process of transit. The Tasmanian system of allotting fruit for export under the quota was equitable: but fruit shipped outside the quota at the expense of Victorian growers was liable to break down the system. N. Tasmanian fruit was also sent to Sydney and encroaching on the space allotted to N.S.W. growers.

This matter was referred to the Victorian Exporters' Handling Committee.

Bounties on Export.

Mr. Mills reported that in company with Mr. Brown and the Secretary, the Prime Minister and the Minister for Commerce had been interviewed at Canberra. The request for a revision of the 1937 bounty had been asked for in the light of later figures available, but this had been refused. Regarding a bounty for 1938, the Government was requested to make this 1/- per case in view of subsidised export from other countries and the heavy increase in Australia of the cost of packing materials, etc.

He (Mr. Mills), had asked that the decision re bounty be made before prices overseas were known. In this connection he firmly held to the view that the decision re bounty should be made very early in the season so that growers could take the bounty into account when making their calculation as to selling or consigning. The Prime Minister had promised to give consideration to the matter of bounty for 1938.

Mr. Brown stated the case for the bounty had been very ably put forward by Mr. Mills, and he believed the Government was impressed. Regarding funds for **Apple publicity in Australia**, the Government had stated they could not effectively collect these by way of excise or sales tax: they had refused similar requests from other industries. The Government had promised to consult the States at once and to bring the matter forward at the Agricultural Council, but he (Mr. Brown), felt this proposal was unsatisfactory. Time was being lost. An Apple campaign to be successful, should be conducted when the fruit was at its best. It was useless waiting until August for a commencement. This matter had subsequently been discussed further with the Departmental officers who advised the Government on these matters, but apparently there was fear of evasion under the excise or sales tax systems.

There was considerable discussion, and it was finally decided that a deputation be appointed to wait on the Premier and the Minister for Agriculture on this matter—the deputation to consist of Messrs. G. W. Brown, J. G. B. McDonald, H. McLean, J. B. Mills, and a representative of the Cool Stores' Association.

It was further decided to write to Mr. E. McCarthy, Dept. of Commerce as to the stage of the negotiations between the Federal Government and State Governments.

Revision of Ottawa Agreements.

Correspondence from the Australian Apple and Pear Council was tabled re the Government's proposals for revision of Ottawa Agreements. The chairman stated that the question of the advisability of Mr. Mills going to London had been discussed with the Federal Government, but as the decision as to alteration, if any, to the present proposals would be decided in Australia, it was felt no good purpose would be served by the visit.

Mr. Mills stated the present position had no parallel with what transpired at Ottawa. His services were available to the Government here as desired for any negotiations.

Saturday Afternoon Closing.

A report was submitted to the effect that metropolitan fruit retailers having by petition secured the right to close their shops on Saturday afternoons during the Winter, were moving to make the closing on Saturday afternoons compulsory throughout the year. It was noted that under the Shops and Factories Act the retailers had the right to control their hours of trading by presenting a majority petition.

TASMANIAN FRUIT CROPS — ESTIMATES FOR SEASON 1937-38.

BASED ON ESTIMATES received from 370 representative orchardists throughout the State, who were responsible for 39 per cent. of last season's Apple crop, and 56 per cent. of Pears, it is expected, states the "Huon and Derwent Times," that the production of Apples for the season 1937-38 will be about 4,500,000 bushels, and of Pears 200,000 bushels.

Apples:

A four and a half million bushel crop of Apples will be less than the 1936-37 crop by about 111,000 bushels, representing a decline of 2.5 per cent. In the Huon and other Channel districts there will be a heavy crop of Scarlets, while all other varieties are variable. Many growers report the appearance of spot and other pests in their orchards.

Conditions in the Tamar Valley and other northern districts have been favorable throughout, and prospects generally are for heavy crops of Cox's and Jonathans, and medium to good for other varieties.

The production of Apples in Tasmania for each of the last five years was as follows:—

	Bushels.
1932-33	4,410,000
1933-34	4,953,000
1934-35	3,934,000
1935-36	3,950,000
1936-37	4,611,000
Average for 5 years	4,371,000
Estimate for 1937-38	4,500,000

On the experience of growers who have furnished reports, the different varieties should contribute to the crop in the following order:—

Varieties.	1936-37. Bushels.	1937-38. Bushels.
Sturmers	1,176,000	1,121,000
Jonathan	733,000	689,000
Cleopatra	590,000	527,000
Democrat	424,000	310,000
French Crab	314,000	288,000
Scarlet	314,000	356,000
Cox's Orange	134,000	216,000
Crofton	124,000	130,000
Granny Smith	134,000	166,000
Gvtn. Fanny	64,000	76,000
Other varieties	604,000	621,000
	4,611,000	4,500,000

Compared with last season the largest decline is expected in Democrats, with a drop of 114,000 bushels or 26.9 per cent., followed by Cleopatras, 63,000 bushels or 10.7 per cent. Sturmers, 55,000 bushels, or

(Continued on page 33.)

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New South Wales: Griffith Producers' Co-op. Co. Ltd.
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Market Notes & Prices

FRUIT PRICES IN THE SYDNEY MARKET.

Survey of Operation for the Period February 25 to March 25, 1938.

By L. T. Pearce, Market Representative, Fruitgrowers' Federation of N.S.W.

INTEREST during the past four weeks has chiefly centred around the Apple position, and, in particular, the increasing arrivals of the Jonathan variety. The quantities of Apples received from Tasmania have been much larger than is usual so early in the season, and force of numbers over a period of three weeks caused values of the best sizes to recede from 7/- and 8/- to 5/- and 6/-. At the beginning of March, Jonathan of counts 150 and 138 were popular, but at the present time counts 113 and 125 are those most wanted, while count 150 is probably worth no more to the average buyer, and is certainly less preferred, than counts 198 and 216 at 5/-.

This alteration of the popular size is no new happening, and almost every year count 150 becomes unpopular at this time.

It is surprising, therefore, that more growers do not anticipate the position by cool-storing sound fruit of this size until later in the season, and, as evidence that this is regarded as a sound proposition, is the fact that others are buying and cool-storing. This continuance of "blind marketing" and the gratuitous profit permitted to speculators is hard to understand, when by a little interference in relation to supply, an increased demand would result in more payable prices.

Unfortunately, stocks of Apples have been greater than was required, and off-types have been under offer at what must be unpayable prices. Worcester Permain are now finished, and Alexander well advanced in their season. Duke of Clarence are still appearing, and a few Delicious are also arriving, together with even a few French Crab. Small Cleos. have been particularly difficult to move, while C.O.P. would have been better retained on the orchard in most instances. Tasma Pride, because of their similarity to the Jonathan, have sold fairly well, but Jonathans generally have been preferred.

A few Apples have arrived from Victoria, but the quantity has not been considerable. N.S.W., on the other hand, has forwarded steadily, but dry weather conditions have affected the size of the fruit to such an extent that large sized fruit is very scarce. In addition, the anticipated infestation of Codling Moth that usually accompanies a dry season is now very pronounced, and much fruit submitted for export has been rejected on these grounds. Export to the United Kingdom is now well advanced, and the supply of Granny Smith on the Sydney market is a little less than it has been.

Although the rush of Williams **Pears** was over more than a month ago, this fruit is still appearing, and values, until latterly, have been firm at 8/- to 10/-. Demand latterly, however, has eased a little as buyers are finding that the fruit does not maintain its quality very long. Packham's Triumph have appeared from N.S.W., Victoria and Tasmaina, and with comparatively ready sale at around 9/-, supplies have been larger than usual, as cool-storing was not worthwhile. Beurre Bosc., Beurre de Cap. and Winter Cole have also come chiefly from Tasmania, and, together with other Pears, have met with very satisfactory request and prices.

The over supply of ripe **Bananas** that existed some weeks ago as a result of extremely hot and humid conditions, gave place to a general shortage. This shortage followed the quick maturing that had resulted on the Banana plantations as a result of the hot weather, and supply dropped from 20,000 tropical cases per week to around 13,000 cases per week, values recovering as supplies became scarcer. The November dumps are now appearing, and much of this fruit is well developed.

The apparently inexhaustible second crop of **Valencia Oranges** is still appearing, with the best fruit selling to about 9/-, and average sales in the vicinity of 5/- to 6/-. A proportion of this fruit has been of very inferior type, and some of it has only left the market by way of the rubbish tip, but growers generally have found the extended second crop a steady source of income, after two very unprofitable seasons. Supplies appear to be still fairly plentiful, and main crop is still coming from the Irrigation Area. Values of the main crop have gone as high as 17/-, and some of this fruit has been in wonderful condition.

The continued scarcity of **Lemons** has meant that values have been maintained and even comparatively rough fruit sold satisfactorily. During the last week demand eased a little for some unknown reason, unless it was that buyers were preferring the choice "Benyenda" brand of Lemons arriving from Queensland. Supplies from other States and the M.I.A. have been very light, and coastal growers have been induced to forward some green, main crop fruit.

Grapefruit has been available from California, and recently a few cases arrived from Queensland, while the first coastal new season fruit appeared this week. A shipment from Palestine originally consigned to Melbourne is expected to arrive on the 28th instant. A few Navel Oranges also have arrived from California and these cleared immediately at 40/- per Californian case.

The **Grape** season has not been a conspicuously successful one for inland growers, as Purple Cornichon from the M.I.A. have not had their usual size and appearance, while dry weather conditions in the Western districts of the State, such as Young and Orange, have caused the fruit to be small and frequently wilted. Much fruit from these districts, in addition, has suffered as a result of the "bunch mite," and growers would be well advised to secure the Departmental leaflet in relation to the treatment of this pest. Doradillo or White Sherry have been fairly plentiful, but prices received have seldom exceeded 4/- or 5/-, while the last of the Waltham Cross have met with a varied reception according to the district in which they were grown. Although very late in the season, a few Black Muscat are still appearing from the metropolitan sources, and are in good request. The quality of Gordos is also varied acording to the districts in which they were grown.

Melons have been fairly plentiful, and average values have been in the vicinity of 7/- or 8/-.

The **stone fruits season** is now well advanced, and Plums have appeared in decreasing quantities, chiefly from the Orange district. Values appeared fairly firm until last week, when the over maturity of the fruit deterred buyers from purchasing, and values eased. The available Peaches are chiefly rejects from canning on the M.I.A., and Pullar's Cling from Victorian sources. Only a restricted demand was experienced, as much of the fruit was marked and of poor appearance, but a slight revival in demand occurred at this week-end.

Passionfruit became a little scarcer as the month advanced, and values accordingly improved. Choice fruit is selling mostly around 8/- to 10/-. Like many other fruits, the price obtained for this product depended upon the operations of country buyers on Tuesday and Wednesday, or the limited week-end demand for salad purposes, which induced suburban retailers to purchase on a Friday. **Pineapple** deliveries have been fairly

TASMANIAN FRUIT CROPS.

(Continued from page 32.)

4.7 per cent.; Jonathans, 44,000 bushels or 6 per cent.; and French Crabs, 25,000 bushels or 8.3 per cent., while increases are shown in Cox's Orange, 82,000 bushels or 61.2 per cent.; Scarlets, 424,000 bushels or 13.4 per cent.; Granny Smith, 32,000 bushels or 23.8 per cent.; Geeveston Fanny, 12,000 bushels or 18.8 per cent.; Croftons, 6,000 bushels or 4.8 per cent., and other varieties, 17,000 bushels or 2.8 per cent.

Pears:

It is estimated that the Pear crop will be about 200,000 bushels, representing a decrease of 70,000 bushels or 26 per cent. on the production of last season. This estimate is made up of 49,800 bushels of canning varieties, and 150,200 bushels of other sorts."

Apples in Sydney.

The arrival in Sydney of approximately 41,571 cases of Apples (including a few Pears) from Tasmania this week, March 23, 1938, brings the total from that State to N.S.W. to almost 100,000 cases in a fortnight. Probably more than 50 per cent. of these have been Jonathan, in addition there have been a few cases of the same variety from Victoria, and a portion of the 183,000 crop estimate from this State. Three weeks ago counts 138 and 150 were the 1/- per dozen size at 7/- and 8/- a bushel, but force of numbers has permitted the buyer to now demand counts 113 and 125 at 6/- for resale at 1/-, while 150 is less preferred and no higher in price than counts 198 and 216, which are chiefly at around 5/-, for resale at 6d. per dozen.—L. T. Pearce, Market representative Fruitgrowers' Federation of N.S.W.

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heavy, but values have been fairly well stabilised around 7/- to 9/- most of the month.

The scarcity of **Tomatoes** became apparent about the middle of March, and it became evident that the hot weather conditions experienced in most Tomato districts had affected the growth of young plants. A few cases have appeared from Portland in Victoria, and also from Western Australia, while Tasmania also forwarded a few small consignments. Queensland supplies ceased during the third week in the month, the Stanthorpe crop being finished. M.I.A. supplies have not been as noticeable as usual, but a few choice fruits are now appearing from the Orange district.

Prices:—

Apples—Fancy and Good (per bush.): Alex. (Tas.), 2/6 to 3/6; C.O.P., (Tas. and N.S.W.), 3/- to 4/-; Cleo. (Tas. 2/6 to 5/-), N.S.W., 2/6 to 5/-; Del. (Tas. to 9/-), N.S.W., 5/- to 10/-; Duke of Clarence (Tas.), 2/6 to 4/-; Fanny (Tas. 3/- to 6/-), N.S.W., 3/6 to 6/6; Granny Smith (N.S.W.), 3/6 to 7/-; Jon. (Tas. 4/- to 6/-), N.S.W., 4/- to 6/6; King David (N.S.W.), 3/- to 5/-; London (N.S.W.), 3/- to 5/-; Tasma Pride (Tas.), 3/- to 5/6; Others, 2/- to 4/-; extra fancy higher.

Pears (per bush.): Bosc. (N.S.W. and Tas.), 5/- to 7/-; Cap. (N.S.W. and Tas.), 5/- to 7/-; Gansell's Bergamot (Tas.), 5/- to 7/-; Howell (N.S.W.), 5/ to 7/-; Packham's (N.S.W., Vic., and Tas.), 7/- to 10/-; Williams (N.S.W.), 7/- to 10/-; Winter Cole (Tas.), 7/- to 10/-.

Bananas — N.S.W. and Q'land.: Prices according to the Banana Marketing Board of N.S.W. Regulation graded, first quality fruit. Six, seven, eight and nine inch, 14/- to 22/- per tropical case. Market firm, supplies light.

Citrus Fruits—Grapefruit: Cal., 40/- per Cal. case; Queensland, 12/- to 20/- per bush. **Lemons, N.S.W.,** 80 to 113, 5/- to 7/- per bush; counts 125 to 150, 7/- to 10/- per bush.; counts 163 to 252, 9/- to 12/- per bush.; cured, 5/- to 14/-; Plain grade, 3/6 to 6/-; Green, 5/- to 8/- per bush. Inland: 10/- to 14/- per bush. S.A. and Vic.: 9/- to 16/- per bush. Q'land: 16/- to 19/-. **Valencias,** N.S.W., local, standard, 7/- to 13/-; plain 4/- to 8/- per bush. Second crop 2/- to 6/-, few to 9/-; in ferior unsaleable. Inland, 8/- to 16/-. **Navels:** U.S.A., 40/- per Cal, case.

Figs (N.S.W.): 2/- to 4/6 per ½ bush. **Grapes:** N.S.W., Inland, Purple Cornichon, 4/-; special, 5/-; Waltham Cross, 5/- to 6/-; inferior, from 2/6; Doradilo, 4/- to 5/-; Black Muscat, 3/- to 6/-, few to 7/-; Gordo, 3/- to 5/-, few 8/- per half bush. Local, White Sherry, 4/- to 5/-; Black Muscat, 6/- to 8/- per half bush. Inferior in all types lower. **Melons:** N.S.W., Inland, Cal. Cremes, 6/- to 8/-, few higher; Hale's Best, 5/- to 8/-; Honeydews, 6/- to 9/-, few higher all types, per tropical case. **Persimmons:** N.S.W., 2/- to 4/-, few higher per half bush. **Peaches:** N.S.W., Inland, 3/- to 5/-, few 6/- per half bush.; others, 5/- to 9/-. Vic., 5/- to 9/-. **Plums:** N.S.W., Inland, 3/- to 5/-, few higher; small and over-ripe from 2/- per half case. **Passionfruit:** N.S.W., 5/- to 7/-; inferior from 2/-; few to 10/- per half bush. **Pineapples:** Q'land., 7/- to 9/-, few higher per trop. case. **Quinces:** N.S.W. and Vic., 5/- to 7/-, few higher; inferior from 3/- per bush. **Tomatoes** (per half bush.): N.S.W., 6/- to 10/-; special, 12/-; W.A., 8/- to 12/-; Tas., 5/- to 8/-; Vic. (per bush.), 14/- to 22/-, few higher.

SOUTH AUSTRALIA.

Adelaide (1/4/38).—Apples (eating) 3/- to 4/- case; do. (cooking), 2/- to 3/-; Bananas (Q'ld.), 24/- to 26/-; Figs, 6/-; Grapes (dark), 8/-; do. (white), 8/-; Lemons, 7/- to 8/-; Oranges (common), 8/- to 10/-; do. (navel), 10/- to 12/-; Passionfruit, 12/-; Peaches, 7/- to 8/-; Pears (eating), 5/- to 6/; do. (cooking), 4/-; Pineapples, 15/-; Quinces 2/6 to 3/-.

WESTERN AUSTRALIA.

Perth (30/3/38).—Apples: Jons. flats, 3/- to 5/-; dumps, 5/- to 10/9; Dunn's, flats, 2/6 to 4/-, dumps 3/- to 6/6; G.S., flats 3/- to 4/6, dumps 4/- to 9/6; Cleo., flats 2/- to 4/-, dumps 3/- to 6/6; Del. flats 5/6 to 9/-, dumps 7/- to 12/-. Citrus: Oranges, Val. flats 9/- to 16/-, dumps 10/- to 24/-; Navel, flats 4/ to 13/-; Lemons, flats, 3/- to 8/6. Other lines: Peaches, flats, 5/- to 10/6; Pears Bartlett, flats 7/- to 12/6, dumps 10/- to 14/6; other varieties 3/- to 6/-; Grapes, open, white 6/- to 12/-, closed 5/-, colored 5/- to 8/6; Passionfruit, flats, 4/- to 9/-; Tomatoes, flats, 1/- to 9/-; Bananas, crates, 21/- to 27/-.

QUEENSLAND.

Brisbane (18/3/38). — Messrs. Clark & Jesser report as follows:—Apples from the Stanthorpe District are now practically finished, and Vic. and Tas. supplies are starting to arrive. The ruling values are:—Apples, Jon. 2½, 2¾, 7/- to 8/-, 2¼, 5/-, 5/6; Del. 6/- to 7/-; G. Smiths, 6/- to 7/-. Pears, W.B.C., 9/ to 10/-; W. Coles, 10/- to 11/-, small sizes 5/- to 6/-; Howells, 6/- to 7/-; Caps., 7/- to 8/; B.B., 7/ to 7/6. Oranges, Vals., 13/- to 15/-; second crop, 6/- to 8/-. Plums, Pres., 6/- to 7/-; Grand Dukes, 5/- to 7/-, small sizes to 5/-. Grapes, Muscats, 4/- to 5/-; W. Cross, 5/- to 6/-; Purple Cornichon, 7/-; Gross Coleman, and Ascots, 3/- to 4/-. Lemons, 14/- to 15/-. Passionfruit, 9/- to 10/-. Pineapples, smooths, 6/- to 7/- per case. Bananas, green, 12/- to 14/-. Tomatoes, 7/- to 9/-. Celery, S. Aust., 18/- crate.

Brisbane (21/3/38).—Messrs. W. Arkell & Sons advise prices as follows:—Apples, Jon., Del. and G.S., 6/- to 8/-. Pears, W.B.C., 6/- to 10/-; Howell, 6/- to 8/-; W.C., 9/- to 11/-; B.B., 5/ to 8/. Oranges, 12/- to 15/-. Lemons, 9/- to 14/-. Plums, 4/- to 7/-. Grapes, Muscats, 4/- to 5/-; others, 3/- to 7/-. The Apple and Pear market is not so brisk, owing to larger quantities arriving. Plums are mostly not very ripe and not selling freely.

VICTORIA.

Melbourne (4/4/38). — The following prices were quoted by the Victorian Wholesale Fruit Merchants' Association:—Per Case: Apples, eating, 3/- to 5/-, choice higher cooking, 2/- to 3/6, choice higher. Bananas, double case, green, 17/- to 23/-. Cucumbers, 2/- to 4/-. Grapes, 4/- to 9/-; special higher. Grapefruit, 7/- to 18/-, choice higher. Lemons, 6/- to 12/-, choice higher. Oranges, 6/- to 16/-, choice higher. Passionfruit, half case, 2/6 to 5/-, choice higher. Pineapples, 10/- to 12/-, choice higher. Cantaloupes, 4/- to 8/-, few higher. Pears, 4/- to 8/-, few higher. Tomatoes, 2/6 to 5/-, choice higher.

The Melbourne market manager of the Federal Citrus Council of Australia reports that there is only moderate demand for the light supplies of Valencias. Lemons and Grapefruit prices are unchanged. Reports from the early districts indicate that the maturity of the new season's crop of Thompson and Washington Navel Oranges is much further advanced than at this time last year, and it is expected that the marketing of new season's fruit will begin at least a fortnight earlier this year. Sales were as follow:—Vals.: Average standards, 68-75 5/- to 7/-, 84-96 8/- to 9/-, 112-168 10/- to 11/-, 140-182 12/- to 13/-, 200–220, 11/- to 12/-, 248-270 9/- to 10/-; good standards, 8/- to 15/-; selected standards, including M.I.A., 9/- to 16/-, a few 17/-; specially selected 11/- to 18/-, some higher. Lemons: Average standards, counts 140-275 6/- to 9/-, a few 10/-, 140, 300-330 5/- to 6/-, smaller 4/- to 5/-; good standards, 8/- to 12/-; specially selected, 2/- to 3/- higher, according to count. Grapefruit: Specially selected, 28-38, 10/- to 14/-, 45-53 15/- to 18/-, 60-84 19/ to 20/, a few higher; selected standards, 8/- to 18/-; good standards, 7/- to 16/-.

NEW ZEALAND.

Dunedin (25/3/38). — Messrs. Reillys Central Produce Mart Ltd. report as follows:—Heavy supplies of fruit and produce have come to hand during the week. There is an accumulation of Apples, and sales are difficult to effect at payable prices. Increased supplies of Jons, Dels., and Coxes Orange are arriving. Unfortunately quite a few of the consignments of Coxes Orange are badly effected with Bitter Pit. Increased consignments of Pears are also arriving, these consist principally of Conference and B.B.

Oranges are very short, the "Port Sydney" shipment of Jamaican Oranges and Grapefruit being delayed, and not arriving until the end of the week. Transhipment of Cal. citrus fruits are due this week. Small parcels of N.Z. Lemons are coming to hand.

Prices (per case).—Cal. Lemons, 55/-; N.Z. Lemons, 12/- to 15/-. Jamaican Grapefruit and Oranges, new shipment, "Port Sydney," March 25, Australian Vals., 30/-. Bananas, ripes, 23/-. New season's Apples: Coxes Orange, choice, 6/- to 8/6, pitted and wasty, unsaleable; Jons., 5/- to 7/-; Dels., 5/- to 7/-; Worcester Permains, 4/- to 5/-; Cookers, 4/- to 6/-. William Bon Chretion Pears, 7/6 to 10/-. Pineapples, 20/- to 23/-; Conference Pears, 6/- to 8/-; B.B., 6/- to 8/. Per Half Case.—Peaches, 4/- to 6/-; Nectarines, 5/- to 7/-; Dessert Plums, 5/6 to 6/6; Cooking Plums, 3/6 to 4/6; William Bon Chretion Pears, 3/6 to 4/6; Conference, 3/- to 4/-; B.B., 2/6 to 3/6; W.C., 3/- to 3/6.

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Tasmania

GREEN MANURING IMPROVES SOILS — PEST CONTROL — SHIPPING PROBLEMS — WHAT IS THE NORMAL SHAPE OF CLEO? — STATE FRUIT BOARD RE-ELECTED — ROUGH WEATHER DELAYS PACKING.

(By Our Correspondent.)

THE PICKING, PACKING and shipping of the Apple and Pear crop is now in full swing.

Cultivating is mostly completed till the Winter ploughing commences. Those growers who believe in **green-manuring** mostly have their crops in and up ready to plough under in the Winter, and owing to the moist Summer they are looking well. A few growers put their green crops in (for manure) after picking, but such things as horse beans are better put in with the last Summer cultivation I think, under our conditions.

The improvement in the condition and fertility of the soil where green manuring is consistently followed out is very marked. There is less washing away of soil for one thing and the bulk of the surface soil is increased and holds the moisture better.

I find the best cover crops are horse beans (also called tick beans), field peas mixed with oats, rape, mustard and on certain soils lupins, the latter where they do well give a heavy cover.

Spraying is over for the season and the outfits cleaned and put away; of all orchard work spraying seems to be objected to most. As the moth is not quite so active here as in the mainland States, we don't put on so many arsenate sprays as is done there.

Light brown Apple moth is troublesome in places, but arsenate does not seem very effective for it.

Canary fly and red spider are difficult to control, but the nicotine sprays seem to be fairly effective and safe, but too dear.

Personally, I have faith in flour paste and nicotine, it being both cheap, safe and effective for both canary fly and spider.

The fruit on the whole is very forward for the time of year, and several lots of W.P.M. have been stopped by the inspectors for being overripe. The quality of most of the fruit appears to be good, especially Cleos, which are now coming forward freely.

Shortage of Pear Space.

Pear space is as scarce as frogs' feathers and the programme for the north of the island is the worst for years, there is no boat from Beauty Point between the "Australia Star" on March 17 and early April—still indefinite date.

The matter is so important to Tamar growers that it will be necessary to approach the Federal Government for permission to get in outside ships for future years.

The Tamar growers cannot carry on under present conditions, and if the Conference lines cannot or will not supply the space permission to vary the contract must be sought and could hardly be refused.

The congestion on the Hobart wharves is very bad and retards deliveries considerably, the Commerce Dept. appear to be increasing the trouble a little by closing down inspection during dinner and tea hour —previous to last year work was continuous. The lorrymen seem to be the chief sufferers and complain bitterly of waste of time.

There is a continued improvement in the general get-up of the fruit coming forward, the percentage of untidy dirty cases is small.

The inspection on the whole appears to be carried out in a commonsense manner, though I have seen odd lines of Cleos turned down for misshapen fruit that in my opinion were quite up to an acceptable commercial standard. Such a large percentage of this variety are a little less developed on one side that it becomes practically normal for the variety, some growers tell me that if this is carried out as strictly in future that they must stop growing Cleos. Undoubtedly it can be carried too far, the standard should not be so high that the grower cannot make a living.

The State Fruit Board, as you are already aware, was given a new lease of life by the growers at the recent referendum. At the last meeting of the Board, Mr. T. J. McKinley was reappointed as marketing officer and representative in the United Kingdom. He left per "Orontes" on March 12.

The future of the industry is giving the more thoughtful growers much concern, especially the possibility that the duty on foreign fruit may be lowered or even taken of owing to the trade agreements with America. A letter appeared in the "Mercury" on the subject by Mr. Everard Ross, and the position does not look too hopeful.

Spell of Bad Weather.

Since beginning this article, Tasmania has been visited by another bad spell of bad weather, the wind damaged the Pears very badly, rendering thousands of bushels unfit for export by limb rub, even where they were not blown off altogether, in many places limbs and all went. This has caused a temporary difficulty in filling the Pear space as the varieties that were just fit to pick naturally suffered most.

Most districts had deluges of rain which stopped all outside work, the ground was too sodden to walk on, consequently deliveries of fruit to the wharves has been delayed and most growers are doing a bit of overtime now, trying to catch up.

All varieties of fruit appear to be maturing early this season.

Tasmania

EFFECT OF HEAVY RAINS — PROBLEMS OF PEST AND DISEASE CONTROL — CANADIAN CASE INCREASING IN POPULARITY — EXCELLENT QUALITY FRUIT GOING FORWARD TO EXPORT AND INTERSTATE MARKETS.

THE Minister for Agriculture (Mr. R. Cosgrove) is in receipt of the following report from the Chief Horticulturist relative to the condition of orchards throughout the State during the past month.

Weather and Crops.

Unseasonable weather conditions were experienced in almost all localities, the rainfall being particularly heavy, as will be seen from the following recordings obtained from the Commonwealth Meteorologist: Hobart 426 points as compared with the average of 149 points; Franklin 416 points as compared with 193; and Launceston 406 points as compared with 120. These rains have resulted in the fruit on heavy cropping trees coming well up to size, whilst on Cleopatras and varieties carrying lighter crops much of the fruit has had to be turned into the factories, through the size exceeding export requirements. **The colour on most varieties has developed rapidly with lines of excellent quality for overseas and interstate markets.** Growers are advised to be particularly careful in the selection of bitter pit-liable varieties for export, as with the increased size this complaint is likely to be rather prevalent.

Off-year and light cropping trees should be avoided, and where tree pit is present, a delay of several days between picking and packing of fruit intended for export will often give a valuable indication as to whether pit is likely to develop in transit.

The excessive rains have proved injurious to trees planted in moist areas, and although the fruit has developed well the health of the leaves has in some instances suffered. Hot sun following dull or moist periods has resulted in considerable sun scald, and such fruit must, of course, be eliminated from the pack. Owing to the earliness of the season, such varieties as Ribston, Worcester, Alexander and even Cox became overripe for export, and many contraventions have been recorded for this reason. It is inadvisable to ship fruit which is at all advanced in maturity, particularly if this is in the larger sizes and any water core has been noted whilst picking from the tree; water core breakdown is a frequent source of loss and deterioration.

Pests and Diseases.

In spite of the humid conditions, black spot has not developed to any serious extent, the dry Spring and spraying season being, no doubt, responsible for the satisfactory control. **Red Spider,** on the other hand, has become very prevalent in some districts, though owing to the even water supply the fruit has not suffered. Spot is more serious on Pears where adequate spraying has been omitted, nevertheless, this crop is likely to exceed the quantity forecast in December.

Brown Rot on late Peaches and certain Plum varieties has become serious, and under the present humid conditions the greatest care in picking and handling must be taken, whilst no time must be lost between harvesting and marketing or processing. Cases should be carefully lined and in those showing signs of the fungus, cleansing by immersing in boiling water or treatment with formaldehyde is strongly recommended.

Packing.

The export season is now in full swing, and it is noticeable that the Canadian type case has again shown a marked increase in use. Unfortunately, however, all sizes of dump case ranging between the 8-2/3 inches and 9 inches in width are being used, and the Packing Instructors have great difficulty in securing any uniformity in pack under these conditions. The "bulge" pack in the Canadian type case is now more generally practised and the packers are rapidly becoming proficient in this method.

Up to March 5, a total of 226,542 cases had been shipped overseas from Tasmania, and up to March 1, 33,387 cases of Apples and Pears had been despatched to mainland markets.

Hobart, 9/3/38.

SPECIAL NOTICE TO FRUITGROWERS

All Members under Fidelity Bond

In response to numerous requests from growers for information as to who are members of the **Wholesale Fruit Merchants' Association of Victoria** the following list is given. All are members of the above Association, and are registered firms carrying on business in the

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Correspondence is invited by the Association.

Office : **21 Wholesale Fruit Market, Queen Street, Melbourne. Phone F 4866.**

Fruit Packing Equipment

A RECENT visit to the works of Messrs. Daniel Harvey Limited, orchard implement specialists, of Box Hill, Victoria, revealed much activity, particularly in the section devoted to the manufacture of fruit graders, sorting tables, washing and sterilising plants, fruit brushing and fruit wiping machines, gravity conveyors, etc.

To cope with their rapid development in the manufacture of fruit graders and processing equipment, a large two-storey factory was recently added to their plant, and this is fully taxed at the present time to cope with the demand for packing house equipment. Many unique features sponsored by Mr. D. Harvey in his latest designed fruit grader, are as follows:—(1) Independent adjustable grading sections, revolving on ball bearings; (2) Seven inch wide grading belt; (3) Variable speed gears; (4) Elevator rising on low side of belt board. The independent grading sections can be adjusted separately, and the complete grading bar can be raised or lowered within a few seconds.

A number of Harvey single-sided CC series graders were in various stages of construction. This type of machine was specially designed to cope with the demand for a machine suitable for color and count grading. It is obtainable in from six to twelve bins, and is constructed in such a way that it can be placed against the wall, with the bins, sorting elevator and hopper out from the wall, thus conserving floor space. A patented feature and a departure from the old principles is that the elevator delivers the fruit directly on to the grading or lower side of the belt instead of dropping it over the high side which causes bruising. This machine can be easily converted into a twin color grader by backing another single-sider up to the present machine, and affixing a two-quality sorting elevator on to the feed end thereof.

A recent introduction is the Peach and Apricot grader sorter. These are made in various sizes to meet the requirements of growers. One large machine inspected has a capacity of 4,000 cases per day. The method of procedure is firstly to place the fruit in the feed hopper from where it runs on to a roller elevator to two-bin twin graders. The first size taken out is the undersized fruit, and the second size is a marketable variety. Then, all the cannery size fruit runs on to the roller sorter, where the fruit is sorted before passing into the cases. The cases are supported on an automatic case filling mechanism.

This machine combines all the features of other Harvey graders, including variable speed gears, which are applied in three places, i.e., the elevator, the grader, and the sorting table.

The Harvey fruit cleaning machine is meeting with the requirements of both small growers and large Apple and citrus packing houses alike. The horse-hair belts take the fruit through the machine which has, in addition to the horse-hair belt brushes, stationary side brushes which can be adjustable, thus insuring that the fruit is cleaned and thoroughly polished.

The fruit is fed into an automatic hopper on to a single-file two runway elevator which takes the fruit into the brushing machine. After passing through this machine, it is delivered directly on to the grader, or packing bench.

Much activity was also noted in the manufacture of Pear graders. These machines can be made in any capacity to suit the small grower or the large packing-house. Two machines to handle two or more qualities simultaneously can be supplied. The Pears are carried along, stalk downwards, and are not rolled. The sorting table is constructed in a special manner with the canvas belt on a soft floor which eliminates bruising.

The sizing device of this Pear grader is provided with two rubber belts running at an acute angle in the same direction, forming a trough, and arranged to carry the Pears along motionless to their respective bins.

The Harvey hydrochloric acid fruit washer is built especially to meet the requirements in regard to washing Apples and Pears, and is built in sizes to treat from 250 to 7,000 cases per day. In addition to removing the residue, the Harvey washer gives the fruit a fine, healthy appearance. No bruising or bumping can take place in the machine itself, which thoroughly washes the fruit, and removes all traces of arsenate of lead residue and hydrochloric acid.

Space does not permit of a complete review of the orchard implement section of Messrs. Daniel Harvey Limited's business.

A recent introduction to this section is the Petty Plough, which, judging by the sales which now stand over 300, is now fulfilling the claims made for it.

Another recent addition is the Beetle Back citrus cultivator, which cultivates underneath the overhanging boughs of the citrus trees without any possible damage to the limbs.

A complete line of cultivating implements for the fruitgrower, vinegrower, and citrus-grower, are to be found in the implement section of this business.

The business of Daniel Harvey has been established almost 40 years, and at the time of our visit, 80 hands were employed. In other times of the year, the number of employees exceeds 100.

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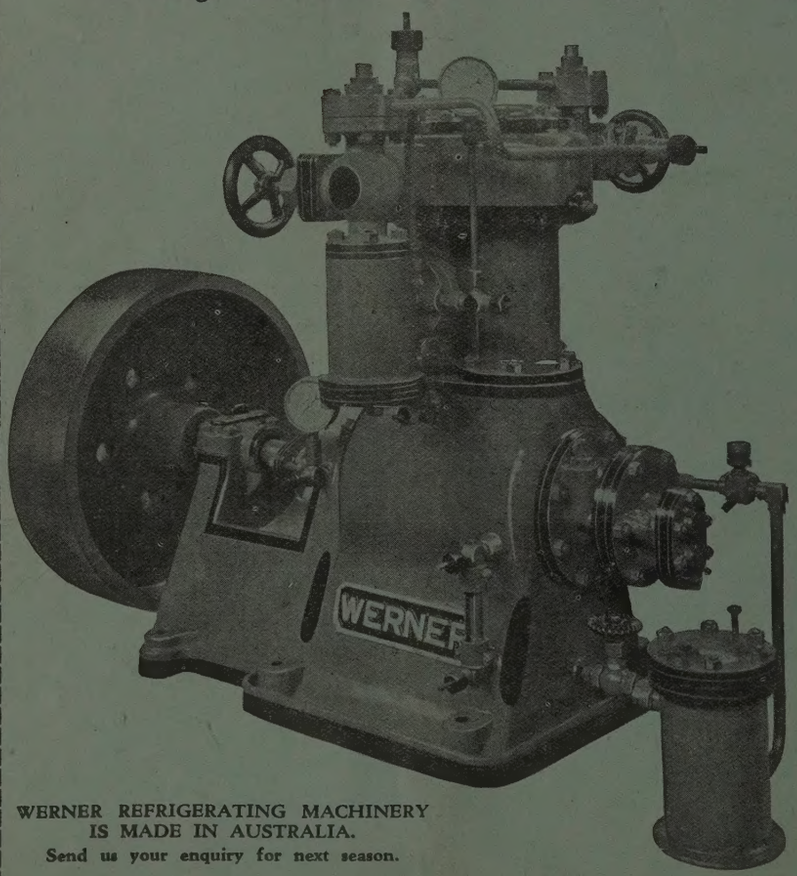

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ORCHARD DRAINAGE.

Open drains are a serious handicap to cultivation operations, but must be made if the land has much fall, whilst closed drains are suitable for gentle grades. The principle in draining most situations is to intercept the flow of water, and this is usually accomplished by making drains across the fall of the land. The depth and distance apart of the drains must be determined by the class and depth of soil. Some orchards showing the need for drainage can be satisfactorily attended to by drains located on their highest boundary. It is wise to ensure that these are deep enough and maintained free from any obstruction at all times.

DRAWBACK ON TIMBER.

To Remain as at Present.

Despite representations again made by representatives of certain timber associations and Australian case and box manufacturers, the Federal Government declined to withdraw the drawback of duty on cases for export, which has been in operation for many years. If the request of the Deputation had been granted, the cost of the cases, it was stated, would have been increased by ½d. each.

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